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The Ohio State University, Ph.D., 1973
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AN EXPLORATORY STUDY OF PUPIL PERCEPTIONS OF TEACHER BEHAVIOR TO DEVELOP A CLASSROOM OBSERVATIONAL SYSTEM

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Truman Dale Whitfield, B.S., M.A.

* * * * * * *

The Ohio State University

1973

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CHAPTER I

THE PROBLEM

Introduction

The study of classroom behavior has attracted a large following in the last two decades. This proliferation of studies has centered largely around the use of observational systems as a means of gathering data. Observation schedules have been developed to serve many functions. Systems have been developed to cover everything from classroom social-emotional climate (Withall, 1949; Flanders, 1963) to the study of content used in specific lessons (Hill, 1969; Herbert, 1967).

The development of observation systems poses many problems. One of the major concerns is what to use as an information source in the development of an observational schedule. Traditionally three sources have been used in the development of observation instruments or procedures: (1) systems developed through some theoretical premises; (2) systems developed from classes of behavior which came from a theoretical position and from time spent in a classroom observing overt behaviors that actually occurred; (3) systems or procedures developed through participant observation and anecdotal record keeping. The latter of the above three procedures is not
actually a process for developing a system, but represents a means for actually collecting data about classroom behavior.

The early studies of classroom behavior relied more heavily on theoretical premises as a source of data for developing an observational system. Anderson's (1939) category system reflects a theoretical position he held concerning dominative and integrative behavior. Withall's (1949) seven category system for analyzing the social-emotional climate of a classroom evolved largely from his beliefs about dominative and integrative behaviors of teachers. The basic underlying assumptions held by Withall (1949) were:

"(1)...that the social-emotional climate is a group phenomenon,
(2) that the teacher's behavior is the most important single factor in creating climate in the classroom,
(3) that the teacher's verbal behavior is a representative sample of her [sic] total behavior [p. 348]."

Flanders accepted some of the same theoretical principles as Withall when he developed his ten category system to analyze social-emotional climate in classrooms. Instead of using the terms dominative and integrative to describe teacher behavior, he created the categories of direct and indirect teacher behavior (Flanders, 1963).

Observational systems that were developed from both theoretical constructs and observed classes of behavior were developed later. A notable example is Hough and Duncan (1970) who constructed a system for instructional analysis from theory and observation.
Classroom behaviors were observed to gather data regarding the nature of the instructional processes and teaching strategies. Hough and Duncan then postulated that different strategies contained specific teacher and student behaviors. These behaviors represented a basis for their observation instrument (Hough, Personal communication, July, 1972).

One element seemed to be lacking in the early attempts at observation system development, viz., nonverbal behaviors. Although Anderson (1939), Withall (1949), and Flanders (1963) mentioned nonverbal behavior, they still relied entirely on verbal behaviors as categories for observation. It was not until Galloway's (1962) exploratory study of the possibilities for observing nonverbal behavior that these behaviors were taken seriously by educational researchers. Working both from theory and observational data, Galloway developed a seven category system for analyzing nonverbal behaviors in classrooms (Galloway, 1962).

The third method of collecting classroom behavior data is that of participant observation and anecdotal record keeping. This process was used by Smith and Geoffreys (1968) in an attempt to study classroom behaviors in an urban setting.

What appeared to need further investigation was the use of pupil perceptions as a source of data for developing observation schedules. Researchers who develop systems in one of the traditional means operate under the assumption that the perceptions of the system
developer are the same as those held by the students. Tuckman (1970) found a discrepancy in perceptions held by students and perceptions held by observers.

Researchers have not fully explored the use of student perceptions as a source of data for developing an observation schedule. Some instruments have been developed which were used to analyze pupil perceptions and attitudes about classroom behaviors (Davidson & Lang, 1960; Flanders, 1964).

This study was an attempt to determine if student perceptions could be used as a source of data for developing an observation instrument.

**Purpose of the Study**

The systematic analysis of classroom instruction has indeed attracted a considerable amount of attention in recent years. Many observational systems have been developed in an attempt to analyze classroom behavior both on the part of the teacher and the students (Simon & Boyer, 1967, 1970). The observational systems have basically been developed in three distinct ways: (1) Theories of instruction or

---

A side issue implicit in this study was the further exploration of the validity question contained in the use of observational instruments. It could be reasonably inferred that student perception as a source of data is a better approximation of the requirements of construct validity and content validity than the three means here-to-for used: [viz], (1) theoretical postulates, (2) observable behaviors, and (3) inter-observer reliability.
classroom behavior were expounded as bases for categories; (2) A combination of theory and direct observation which produced categories; and (3) Participant observation and anecdotal record keeping. What is much needed in the field of observational systems is a system composed of categories which come directly from pupil perceptions of the teacher's classroom behavior. That was the major purpose of this study. By developing categories through the use of pupil perceptions as a source of data the issue of construct validity was dealt with straightforwardly. Very few observational system designers have actually gone to the most likely source (the pupils) for information concerning teacher behavior, thus improving measures of construct validity.

Design of the Study

Statement of the Problem

This study was an attempt to utilize student perceptions as a source of data for constructing an observational system which can be used for analyzing teacher classroom behavior. The following questions provided the focus of this study:

1. Can a valid and reliable procedure be developed to collect pupils' perceptions of their teacher's classroom behavior?
2. Can teacher behaviors identified by students be collapsed into categories that can be used in the analysis of teacher-classroom-behavior? Can categories be inferred from the teacher behaviors?
3. To what degree will a panel of judges agree on the assignment of pupils' perceptions to prescribed categories of teacher behavior?
4. Can an observational system which was developed from pupils' perceptions of their teacher's behavior be taught to observers to such an extent that they can observe and code ten minute episodes of video tapes of a teacher's classroom behaviors?

Delimitations, Limitations, and Assumptions

**Delimitations.** The present study included the teachers and students in twelve sixth-grade classrooms in a quasi-departmentalized middle school. The perceptions studied were limited to those perceptions the students had of their respective teacher in each of the twelve classrooms. The study did not include preservice teachers, teachers of other grades, or administrators.

**Limitations.** The subjects in this study (teachers and students) were not selected on the basis of sex, race, I. Q., or cultural background. There was no preselection of teachers on the bases of personality types.

**Assumptions.** In any study of this nature there are certain assumptions that are made. In this study it was assumed that the interview-schedule would be sufficient for gathering pupil perceptions of teacher behaviors. It was assumed that those perceptions would be representative of all significant teacher behaviors. It was further assumed that in responding to the questionnaire-interview-schedule,

---

2Personality is used here in its broad sense. This study did not purposely deal with such personality types as "authoritarian", or such personality types as may be measured by an instrument such as the Rokeach Dogmatism scale.
the students would share their true perceptions of their teachers rather than provide perceptions which they thought would make the teacher "look good" or "look bad".

Definition of Terms

Communication -- "The transference of thought or feeling from one person to another through gesture, posture, facial expression, tone and quality of voice as well as by speech (Good, 1959, p. 113)."

Nonverbal communication -- "transmitting a thought or feeling from one person to another through gesture, posture, facial expression, tone and quality of voice, or physical contact, as an auxiliary function to speech, or without speech (Galloway, 1962, p. 8)."

Verbal communication -- transmitting a thought or feeling from one person to another through the use of a spoken language system.

Teacher-pupil relationship -- "an interdependent relationship that has been established by the teacher and the pupil through socio-emotional, physical, and intellectual contacts (Galloway, 1962, p. 8)."

Construct -- "a concept that has added meaning of having been deliberately and consciously invented or adopted for a special scientific purpose: e.g., "intelligence", "response" (Kerlinger, 1964, p. 32)."

Questionnaire-Interview-Schedule -- an instrument that was used by the researcher to collect information from students both during
questionnaires and oral interview sessions.

Standardized interview -- one in which the questions have been decided upon in advance of the interview and are asked with the same wording and in the same order for all respondents (Maccoby and Maccoby, 1954, p. 451).

Unstandardized (free) interview -- an interview in which the structure consists mainly of an outline of suggested topics to be introduced at any point at which they seem meaningful by adapting the language to the subject.

Focused interview -- an interview which provides an interview guide with a list of objectives but gives the interviewer considerable latitude within the framework of the interview guide (Merton and Kendall, 1964). This type of interview is a "middle of the road" type which lies between standardized and unstandardized.

Instrumentation

The primary instrument used in this study was a questionnaire-interview-schedule. The questionnaire-interview-schedule was used to collect student perceptions of their teacher's classroom behavior.

The instrument was used in two distinct ways. It was used as a questionnaire with all the students selected for the study, and was then used as an interviewing instrument for five students randomly selected from each class.

Yarrow (1960) writes:
"The interview is a technique particularly well adapted to uncovering subjective definitions of experiences, to assessing a child's perceptions of the significant people and events in his environment, and to studying how he conceptualizes his life experiences [p. 561]."

Maccoby and Maccoby (1954) state:

"Some interviewing is...preliminary to the formal process of measurement in that it is used to suggest what the relevant dimensions for research shall be [p. 449]."

When such an instrument occupies the central position as a study's primary instrument of data collection, the problems of developing the interviewing instrument and measuring reliability and validity become of greater importance than they would otherwise. This concern will be treated thoroughly in Appendix I -- Development and Pilot Testing of the Questionnaire-Interview-Schedule.

Procedure for Collecting the Data

The population involved in this study was twelve sixth-grade quasi-departmentalized classrooms. It was assumed that the quasi-departmentalized structure provided sufficient extended student-teacher contact (minimum of two-and-one-half hours per day); and that student contact with more than one teacher provided an excellent background of teacher behaviors against which the student could compare his teacher's behavior. The upper elementary grades were also chosen in order to obtain a desired level of sophistication in student responses to the questionnaire-interview-schedule items.

Two different types of data were collected. One type of data,
students' statements of their perceptions of their teachers, was qualitative in nature. The second type of data collected was more quantitative. The quantitative data evolved from procedures used in the treatment of the qualitative data.

The qualitative data consisted of students' statements of their perceptions of their teachers. These perceptual statements were collected by using a questionnaire-interview-schedule in two ways. The students were first asked to respond to the questionnaire-interview-schedule as a questionnaire. Five students were then randomly selected from each class and administered the schedule during an audio-taped interview.

The quantitative data came from two sources. First, a panel of judges was requested to assign student perceptual statements to predetermined categories. The results of that sorting were scored depending on whether their sortings agreed with a predetermined sorting. The second type of quantitative data collected was codings of video-taped teaching episodes. The episodes were coded using the observational system developed in the study.

Treatment of the Data

The student perceptual statements collected by both the questionnaire and interview were collapsed into a key which consisted of all statements of pupil perceptions in response to each question on the questionnaire-interview-schedule (see Appendix E). These statements were then analyzed with adjectival descriptors being assigned to
the statements. These adjectival descriptors were then clustered into categories with the perceptual statements serving as conventions for a category system. One-hundred-fifty-nine of the statements were selected to be sent to a panel of judges who were requested to sort the statements into the twelve categories which had evolved from the cluster analysis procedure. Inter-judge agreement coefficients were obtained on the judges' sortings, and the degree to which those sortings agreed with this researcher's sortings.

As a final data treatment procedure the system was taught to a group of observers. The observers coded six video-taped teaching episodes using the category system developed herein. A Cohen coefficient of inter-rater reliability was calculated on the codings.

At the conclusion of the training session, ten minutes of each of five video-tapes made of sixth-grade teacher-student interaction, were coded by the observers. The results of these codings were placed on a histogram depicting the frequency of tallies per category per tape segment. These data were then analyzed by employing the Cohen coefficient of inter-rater-agreement. The results of this data analysis procedure lended some insight as to the reliability of different observers using the system to code classroom interaction.

**Plan of the Report of the Study**

This study involved the exploration of the possible use of pupil perceptions as a source of data for developing an observational system for analyzing teachers' classroom behavior. Since so many
observational systems have been developed in recent years, Chapter II of this study will present a selected review of the literature in the field of observational research. In addition this chapter will present a review of the pertinent literature on perception, the different means of obtaining pupil perceptions of their teachers, and the use of interview techniques as research tools. Chapter III will contain an exposition of the procedures employed in the study. Chapter IV will contain a presentation and analysis of the data collected in the study. Chapter V will include the summary, conclusions, implications that are relevant to this study, and recommendations for further research.
 CHAPTER II

A REVIEW OF RELATED LITERATURE

Introduction

This chapter of the study is a presentation of related literature. The chapter is divided into three major sections. The first section is an exposition of writings in the field of social perception and perceptual psychology. This section is broken down into three parts. The first part is a presentation of a philosophical basis for studying perception. The second part of this section introduces attempts at a conceptualization of the perceptual process. The third part of the literature on perception is a review of some studies which focus on children's perceptions.

The second section of the review provides a discussion of the interview in social research. The literature reported in this section deals with interviewing children. Included in this section is a rationale for the employment of the interview technique in social research. Also included in this section is a discussion of methodological considerations in interviewing children.

The final section of the review of literature is a report of five observational procedures. In discussing observational methodology
the major intent was the analysis of the theory behind the procedure and the way in which the procedure was used. The observational procedures include two structured verbal systems, a structured non-verbal system, and two participant observation procedures.

The Significance of The Role of Perception:

A Study of Classroom Interaction

Introduction

Recently there has been an emphasis on the study of classroom interaction. A major ingredient in such a study is the perceptions pupils hold concerning the classroom and the teacher. This portion of the review of literature will be an exposition of the literature as it deals with the role of perception -- especially student perception of the classroom environment. This section of the review will be divided into three parts. Part I (The Perception of Others -- A Needed Focus) will contain writings of a philosophical nature which serve as a rationale for the inclusion of the study of perception, and the purpose such a study has in the teaching-learning environment. Part II (The Conceptualization of Perception) is an exposition of past efforts to conceptualize the perceptual process. Due to the evolving nature of the study of perception, this section will contain many different attempts at conceptualizing the perceptual process. Part III (Related Studies In Perception) is a presentation of the methodology employed and the findings of studies which were attempts at obtaining
student perceptions of their teachers. A heavy emphasis was placed on the development of instruments used in the studies and the way in which these instruments were utilized in the studies. Such a focus evolved from the fact that the development and implementation of such an instrument was one of the major concerns in this study.

Part I: The Perception of Others -- A Needed Focus

There are many reasons for studying perception. Many people seek better self-awareness through the study of their perception of the external environment. Such is the motivation behind many of the studies conducted by the Gestalt psychologists in their conceptualization of the perceptual event (Kohler, 1929). Recently, however, the study of perception has turned more to the exploration and development of perceptual theory in man's attempt to better understand his relationship to another aspect of his environment -- other men.

There is no doubt that man is in search of a better understanding of his fellow man. Several things have prompted the recent upsurge of the study of interpersonal relationships and the role of perception of those relationships. Stiner (1963, p. 263) says that the more knowledge an individual has concerning the intentions, preferences, and beliefs of other persons, the more effective he is at participating in group activities with the other person. Cantril (1968), on the other hand, has indicated that perceptual awareness aids self-definition. He says that only through the mutual disclosure of purposes can man "increase the reliability of the prognosis of his
own individual purposes [p. 2]. Cantril indicates that the converse is also true in that man will be unsuccessful in carrying out his purposes to the extent that he is unaware of the purposes of those with whom he is associated.

Nowhere are Cantril's postulates more true than in the classroom. There is a continuing necessity for teachers to better understand the purposes students have for their daily classroom behaviors. Since Withall's (1949) classic study of the social climate in the classroom, educators have been keenly interested in the transactional relationships between teachers and students. Much of the meaning associated with those relationships comes from the perceptions the teachers and students hold about the transactional environment. Galloway (1962, p. 45) has indicated that the feeling tone in any classroom situation, the underlying attitudes and feelings of teachers toward pupils, and what pupils perceive about the teacher can promote or hinder the pupils' socio-emotional adjustment in the school. Jennings (1948, pp. 4-6) takes a similar position in discussing the effects of certain perceptions students have and the subsequent effect those perceptions have on the student's withdrawal from the classroom interaction. Jennings has said that if a student does not feel that the teacher and other classmates accept and value him, his emotional reactions may lead to the "restricting of his participation in the activities of the classroom [p. 6]."

In an attempt to better understand the activities of the classroom, some people are now advocating that student perceptions of
teachers should be studied. Such is the case with the present study. Jenkins (1960) notes that the particular behavior of the teacher gains meaning for the students from the particular relationships which they sense the teacher has with them. He says:

"It makes little difference what the teacher's intentions are and how 'good' the methods are that he uses; if he fails to see what meaning his behavior has for the students he will not be able to understand their reactions to him [p. 165]."

Very often what we do "for" children is interpreted by them as being "against" their best interests.

What children do and say and believe is a consequence of the way they perceive the world and the events that make it live. This is very often hard for adults to understand and is even harder to act upon once it is brought to the consciousness level. Teachers and parents are often very insistent that boys and girls see as they (the parents and teacher) see, believe as they do, and act as they act. All this often takes place without either the teacher or the parent attempting to understand or accept the stimuli which make an impact on children. Estvan and Estvan (1959) say:

"Whatever the meaning of the countless stimuli which make their impact upon the child, they constitute his world. Adults who are trying to help children grow up in our culture need to know what each child's world is if they are to be effective. Somehow they must sense his point of view in order to know where to begin and what kinds of assistance the child needs to further his understanding of the physical and social environment in which he must learn to live [p. 3]."
Attempts have been made to link perception and behavior. Combs (1962) says that "perceptual psychologists have stated, as a basic axiom, that all behavior is a product of the perceptual field of the behavior at the moment of action \[p. 65\]." People behave in the world in a direct correlation with their perceptions. To change behavior in any way requires that we understand that perceptual field. People do not behave according to the "facts" as they seem to an outsider. What a person does, what a person learns, is a product of what is going on in his unique and personal field of awareness.

Combs (1962) says that "if behavior is a function of personal meanings, then perceptions must become the center of the teaching-learning situation \[p. 68\]."

Part II: The Conceptualization of Perception

Just as attempts at defining such terms as "learning", "teaching", and "instruction" vary, so have efforts to come to consensus on the meaning of perception. Early work on the processes employed in "object" perception shows evidence of a lack of agreement as to what perception is. Even more disagreement exists in the study of "social" or "person" perception. This section of this review of literature presents some of the attempts at conceptualizing the perceptual process.

Although there is little agreement on many aspects of perception, there do exist some areas of commonality. One idea which seems to draw support from most people involved in the study of
perception is the individual nature of perception. Most writers seem to agree that regardless of what is being perceived, that perception is dependent upon the perceiver. When researchers attempt to obtain perceptions people have of other people, the environment for the research must be open and free from threat. Only through such an environment will people share such highly individual notions (perceptions). Combs (1962) has summed up the individual nature of perception, and the open atmosphere necessary to study perception, by saying:

"Perceptions are within the individual and will not be brought out unless the climate outside is safe for them. No one can force them out. They come only when the perceiver feels that he wants them to be present, and he will not bring them out in the classroom or anywhere else if there is danger that they will be attacked or ridiculed [p. 70]."

The individual nature of perception is also indicative of the purposiveness upon which percepts are formed. This individual and purposive quality has been used by Cantril (1968) in his definition of perception. He believes that perception is indeed a purposive activity. Cantril says that perceptions can only be understood within the individual perceiver's purposive context. Thus Cantril has defined perception as: "An implicit awareness of the probable consequences an action might have for us with respect to carrying out some purpose that might have value for us [p. 7]." Cantril extends this purposive entity into his definition of social perception. He says that the factor that makes a stimulus (object or person) "social"
is that the stimulus has the potentiality of affecting our purposes
and being affected by us. Thus Cantril says of "social perceptions":

"... what we can label as our 'social' per-
ceptions involves other people whose purposes
have the potential influence on our purposes.
Hence, these perceptions are especially
characterized by affective or emotional
overtones [p. 8]."

A second area in the study of perception agreed upon by many
researchers is the selectiveness of the perceptual process. This
selectivity is, in part, an outgrowth of the individual nature of
perception. We see what we wish to see and hear what we wish to hear
when confronting stimuli. Estvan and Estvan (1959) have elaborated
on the selective aspect of perception and sum their position in say-
ing:

"... perception...is an awareness or interpre-
tation of a situation (stimuli) in terms of which
the individual responds and which he maintains or
modifies in light of his experience. It involves
a selective element for not all aspects of the
situation come under the perceivers scrutiny.
It calls for an association of meanings with
sensory stimuli which in many cases have an
emotive or affective quality [p. 5]."

Studies have been conducted on the perceptual process as it
relates to object or person distortion. One series of studies
emphasizes the "selective" quality of perception. These studies
focus on a phenomenon known as the "honi-phenomenon". This
phenomenon was discovered when a perceptual researcher noted that
people who were very close to each other (i.e. husband and/or wife)
failed to recognize deliberately distorted views of each other. As
a woman observed her husband through door glasses into rooms which
were designed to create distortions, she saw him as he normally appeared to her each day. The researcher concluded that the wife selected only those stimuli which portrayed her husband as she was accustomed to seeing him each day. This study was replicated with very similar results (Wittreich, 1968).

Some researchers in the field of person perception have advocated that before the perceiver goes through the selective process he first perceives the person as a unit. Smith (1968, p. 10) has said that we do not see an individual's specific traits and then organize them to form a general impression, but rather we get an almost instantaneous general impression. Smith also reported that:

"At the beginning, we see a person as a whole. By means of our theories, we differentiate element from the whole and make predictions from these elements. The predictions, however, are cut to fit the whole we originally perceived—we move from a homogeneous whole to a differentiated whole [p. 17]."

Asch (1946) has provided extensive experimental support for the idea that we see people as a unit. In a series of studies he read a list of descriptors to a group of people: energetic, assured, talkative, cold, ironical, inquisitive, and persuasive. After reading the list twice he then directed each member of the group to write a characterization based on the descriptors he had read. He found that no two people wrote the same characterization. He also found that although people seemed to use words as referents, none of the descriptors were employed by all of the persons; rather they selected those
words which, when used, would present one picture of the person being characterized.

Bruner's definition of perception embodies the notions of individuality and selectivity, although not explicitly. Bruner (1963) defines perception as "an act of categorization [p. 42]." He says that whatever is perceived is placed in and achieves its meaning from a class of percepts with which it is grouped.

There are several technical problems inherent in this categorization or discrimination of emotions in people. Bruner and Tagiuri (1954) have identified three of these problems. The first of these, says Bruner and Tagiuri, is the "nature of the discrimination demanded of the subject in the emotion-judging task [p. 635]." One can judge the difference in such emotions as love and hate much easier than he can distinguish between fear and anger. (The present study provides some evidence as to the difficulty children have in identifying appraisal behaviors used by teachers.)

A second methodological consideration identified by Bruner and Tagiuri is the labels that judges are asked to use. If judges are provided with a set of labels which are to be applied in order to distinguish emotions Bruner and Tagiuri feel that those distinctions would be less accurate than distinctions made when the judges are allowed to use their own labels. Munn (1940) has shown that subjects reach the highest degree of agreement in judging if they are allowed to use their own terminology and categories.

The third methodological problem of perceptual discrimination
is the assimilation of "cues" in order to make inferences about the internal state of the person being perceived. This issue requires more elaborate analysis since it is actually a central focus in the perceptual process. Virtually all the information available indicates that the more information about the situation in which the emotion is being expressed, the more accurate and reliable are the perceptions (Goldberg, 1951).

What kinds of cues (information) are used in making these perceptual discriminations? From (1971) discusses the "psychoid entities" involved in perceptual discrimination. A "psychoid entity" he defines as a mixture of something material and something mental. He says that both the material and mental entities are at work in perceptual formulation. Material entities are those entities which generally take on some overt action property. They are the expressive outlets for the mental entities. The mental entities are covert and are evidenced through a material entity.

From identifies three characteristics involved in the perception of others. The first of these is "actions". He says that "actions include all experienced entities where the mental aspects has an appearance of being purposive [p. 16]."

Actions are very closely related to the second characteristic -- expressions. From makes the following distinction:

"In our everyday perception of the emotions of others, the material aspects of the experience usually include much more than 'brief' perception of facial expressions. In most cases we are dealing with a definite sequence...of the expressive movements. This expressive behavior
is distinguishable from those patterns of behavior that are perceived as actions because expressive behavior does not appear as guided by a purpose or a meaning, except in the special cases where a person intends to show his feelings [p. 20]."

From would list as expressive behaviors certain cues such as facial expressions, gesticulations, positions and movements of the head and body, the inflexion of the voice, and the rhythm of breathing, etc.

Galloway (1962) has identified similar expressive behaviors as nonverbal cues. He says:

"occurring in the subliminal nonverbal channels of communication, there are manifold silent and hidden interplays of feelings, thoughts, and attitudes. Such a process might be properly called unconsciously felt perceptions [p. 26]."

Among those nonverbal cues identified by Galloway are: vocal tones, facial expressions, gestures, and actions (Galloway, 1970, p. 3). Galloway believes that these "cues" can be identified and carry very strong meaning even though the person sending them is unaware of their effect.

A third characteristic involved in the perceptual discrimination process was also elaborated on by From (1971). This characteristic From calls "stamps". A "stamp" is a mental aspect which has a more permanent quality or trait. The "stamp" is closely aligned with certain personality characteristics. Examples of stamps are friendly, over-bearing, or withdrawn, etc. Actions or expressions may be assigned the quality of "stamp" after extended interaction with a person. If
we see a person often, it will frequently happen that as time goes by
we perceive him differently from the way we perceived him at first.
We can describe an important aspect of this change by saying that
different details in the perceived stamp are becoming a part of the
total pattern.

Bruner (1963) says that a degree of "perceptual readiness"
is necessary if perceptions are to be properly categorized. He
refers to perceptual readiness as "the relative accessibility of
categories to afferent stimulus inputs [p. 46]." He says that the
more accessible a category, the less the stimulus input required for
it to be sorted in terms of the category. Bruner says that four
kinds of mechanisms are used in dealing with known phenomena of
perceptual categorization and differential perceptual readiness.
They are: "grouping and integration, access ordering, match-mismatch
signal utilization, and gating [p. 47]."

In addition to Bruner's notion of perception as an act of
"categorization", and From's "psychoid entities", one other attempt
at the conceptualization of the perceptual process was investigated.
Heider (1963) aligns himself with a school of thought evolving from
Brunswick's work in perception -- the casual analysist. This school
holds that perception can be viewed as a "perceptual arc" encompassing
two end points -- the object, i.e., the part of the environment
toward which perception is directed; and the percept, i.e., the way
the object appears to us.

Brunswick (1956) discusses this perceptual definition (i.e.
perceptual arc) in terms of the "initial focus or distal stimulus", and the "proximal stimulus". The "initial focus or distal stimulus" is the starting point of the perceptual process. It is called the distal stimulus because it pertains to something "outside the person's skin", or at a distance from the person. The distal stimulus, however, does not directly affect the person. Rather it is mediated, for example, by light or sound wave patterns that excite his sensory organs. As the stimulus pattern impinges directly upon the sensory organs of the perceiver it becomes what Brunswick calls the proximal stimulus. The proximal stimulus is the stimulus that is physically in direct proximity to the person. Thus the perceptual process involves distal stimuli, and mediation ending in the proximal stimuli.

Two concepts have often been associated with the study of perception. The first of these is "attitude". The line between perception and attitude is a blurred one. Characteristics associated with each of these concepts overlap in many respects. Some points of difference do appear. Warr (1968, p. 4) discusses three areas of distinct difference in attitudes and perception. In the first place attitudes are generally taken to be relatively permanent structures which are resistant to change. Perceptions, however, are more flexible and amenable. Secondly, attitudes may have as their objects more general or abstract entities than do perceptions. Finally, perceptions appear only in the presence of a stimulus. Yet the more permanently generalized nature of an attitude allows it to persist when no stimulus is present.
Perceptions and attitudes are related in some respects. Perceptions are influenced by attitudes. Attitudes are often formed or changed dependent upon the way a source person or object is perceived (Warr, 1968, p. 4).

A second concept often associated with perception is "judgment". Judgments may be made in the presence of a stimulus or in the absence of such a stimulus. If a stimulus is present the judgment has been called a "perception". If the stimulus is not present, or if the object or person is not serving as a stimulus, then the judgment has been called a "conception" (Warr, 1968, p. 4).

Warr (1968) has used the term "attributive judgments" to refer to those judgments made of people, and more closely associated with perception. He has further defined attributive judgments as being either "episodic" or "dispositional". Warr says "'episodic' judgments are those made about someone's state during a particular sequence or episode of behavior [p. 8]." These judgments are related to a temporary state of the person (e.g. boredom). He defines dispositional judgments as "those (judgments) about permanent characteristics and which are relatively independent of a particular episode". A dispositional judgment may summarize behavior over a wide range of situations of it may seem to concern specific segments of behavior.

It makes little difference what terminology we apply to the conceptualization of perception, there is one recurring consideration -- accuracy of perception. Although no studies on the accuracy of judging others have progressed to the point at which sound substantive con-
elusions can be brought to bear upon a theory of judgment, some efforts have been made. As accuracy has been defined thus far, it may mean simply that a particular judge shares the most common bias found among his fellow judges. However, a few firm conclusions may be drawn as they concern accuracy of judgment. Bruner and Tagiuri (1954) list the following:

"(a) Accuracy is aided by similarity between judge and that being judged.
(b) Accuracy depends upon having cues to work on. Traits with little behavioral manifestation are poorly judged.
(c) Certain systematic errors in judgment -- halo effect, logical error, and the like -- account for much of the error involved in judgment.
(d) There are systematic relationships between various personality variables and judging ability.
(e) A global or intuitive approach seems to improve judgment [p. 645]."

Part III: Related Studies On Perception

There has been a proliferation of studies in perceptual psychology over the past few years. However, very few of those studies deal with the way in which students perceive teachers. The following studies are related to students' perceptions of their teachers.

An early study on students' perceptions of their teachers was conducted by Medley and Klein (1957). This study was undertaken to find out if a pupil-reaction inventory could be constructed that would yield information about classroom behavior that was independent of the pupil's general attitude toward the teacher. The inventory (My Class
Inventory) developed consisted of forty-seven items printed in a haphazard order, comprising four scales -- Halo, Disorder, Supportive, and Traditional. The Halo Scale contained eight items designed to elicit the student’s over-all feeling about his teacher. The remaining items were intended to measure behavior. One scale related to pupil behaviors (Disorder Scale) and two scales related to teacher behavior (Supportive and Traditional Scales).

The inventory was administered to 1,289 pupils in grades three through six. In addition follow-up observations were made to determine whether pupil responses were actually occurring classroom behaviors. It was shown that the Halo and Disorder Scales were reliable measures of different things and that the other two scales measured a third function but with low reliability. Medley and Klein concluded that "pupil responses to questions about the classroom can yield information, not only about pupils' feelings for the teacher, but also about what actually happens in the classroom." [p. 319]

Estvan and Estvan (1959) conducted a study in which pupils were asked to share their perceptions of various life situations. The objective of the study was to describe what children had to say about certain life situations by presenting contrasts in rural and urban environments, upper and lower socio-economic backgrounds, and in child and adult activities. This was done by presenting a Life-
Situation Picture Series consisting of fourteen scenes. Comparisons were made of the reactions of farm and city children, boys and girls, as well as between bright and below average children.

The Life-Situation Picture Series instrument was administered individually to a total of eighty-eight children. They were selected at random and in equal proportions from all the first and sixth grade children attending one-room schools in a rural Wisconsin county and from all the first and sixth grade pupils attending the public elementary schools of a Wisconsin community of approximately 55,000. Sex was equated within each class. All were white, American, free from serious speech defects, and had birthdays between June 1 and December 21. For purposes of comparison, intelligence groups were formed by selecting two pupils having the highest intelligence quotient in each of the eight subgroups to constitute the high-ability sample, and by using similar procedures at the opposite

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There are many things that should be taken into consideration in the construction of a life-situation picture series. Estven (1958) lists five such criteria.

"(1) The instrument should be based on life-like social situations.
(2) Social situations should be representative of various types of social background.
(3) Social situations should be structured with respect to the elements involved in social perception (space, time, attitudes or feelings).
(4) Social situations must contain figures with which children can identify or sympathize.
(5) The presentation of social situations should facilitate the expression of perceptual behavior [pp. 217-218]."
extreme to form the low-ability group.

One portion of the Estvan and Estvan study concerned student perceptions of the school setting. The schoolroom picture was included to elicit ideas about education and human relations experienced by children in school. Based on information supplied by students in responding to the Life-Situation Picture Series as they relate to the school Estvan and Estvan drew the following conclusions:

"Children were in agreement...that this life situation was most suited to girls [p. 206]."

"They identified themselves with the children rather than with the teacher, and were more concerned about peer relationships than with those existing between pupil and teacher [p. 209]."

"It appears that children are not as fond of school as adults would like them to be. The fault does not lie in their disregard for learning as such. Rather, it seems to be based on the kinds of things pupils do in school, the way they get along with others, and the evaluation made of their efforts [p. 219]."

"He values learning experiences on the basis of whether they are exciting or interesting rather than whether they prepare him for future 'needs' [p. 222]."

Munsee (1962) conducted a study in an attempt to ascertain (1) the relationship between the pupils' perceptions of the teacher and the factors of intelligence, skills for academic work, and personality adjustment of the pupil, and (2) the relationship between pupils' perception of the "real" teacher and his "ideal" teacher. To obtain information regarding the pupils' perceptions of the teacher the Q-sort method was used. A total of thirty-six statements describing how a pupil might perceive a teacher was used. Each pupil made two
sorts -- a sort showing how the pupil saw a teacher through experience with teachers, immediately followed by a Q-sort showing how the pupil perceived the ideal teacher.

The results of the Munsee study indicate that pupils with high I.Q. scores, more adequate basic skills and personality adjustment see the teacher more positively than do those with lower I.Q. scores, more inadequate basic skills and personality adjustment. Those who see the teacher positively see the "ideal" teacher more nearly like the "real" teacher than do those who see the teacher negatively. The more negative the perception of the "real" teacher the less correlation with the perception of the "ideal" teacher.

In yet another study of student perceptions, Davidson and Lang (1960) used an adjectival check list as a means of securing responses from students. The purpose of the Davidson and Lang study was to determine what the relation is between children's perception of their teachers' feeling toward them and the variables: self-perception, academic achievement, and classroom behavior.

In order to develop the check list Davidson and Lang selected words and phrases on the basis of the following three criteria:

1. The words should be those commonly used to describe how people feel toward and how people think of others especially how teachers feel toward and think of children.
2. The words should be easy enough for children to read.
3. The list should contain about an equal number of words connoting positive and negative feelings.
From an initial pool of 200 items, 135 were kept after applying criteria one and two above. Each of these words was then rated by 35 teachers as being favorable, unfavorable, or neutral. Only those words being judged as favorable or unfavorable by 80% of the judges were kept. This list was then cut to 35 words.

Using the check list, 89 boys and 114 girls were asked to report their perceptions. They were first requested to react to the adjectives in terms of "My teacher thinks I am." The second reaction was made in terms of "I think I am." The first responses yielded a measure of perceived teacher feelings, and the second was a measure of self-perception.

The major findings were: (1) The children's perception of their teacher's feelings toward them correlated positively and significantly with self-perception; (2) The more positive the children's perception of their teachers' feelings, the better was their academic achievement and the more desirable their classroom behavior as rated by the teachers; (3) Girls generally perceived their teachers' feelings more favorably than did the boys.

The final study included in this review was conducted by Coats (1970). The objective of Coats' study was to determine the number and nature of factors which underline student perceptions of teachers. In an attempt to identify those factors a questionnaire was administered to junior-high school students. The instrument had questions which focused on constructs such as: the teacher's knowledge of subject, the teacher's fairness, control, encouragement of student participation,
and a sense of humor, etc.

The results of the study support the notion that one evaluative factor accounted for much more of the variance in student reactions to teachers than any other factors. This factor was identified as a kind of teacher charisma or popularity.

Summary of the Review of Literature on Perception

This section has presented a review of perceptual literature. The first portion stressed the need for a focus on student perceptions. The second section was a presentation of several attempts at the conceptualization of the perceptual process. The presentation of this section illustrated the fact that the study of perception is still an evolving field. The final section was a review of some studies conducted in an attempt to obtain student perceptions of their teachers. In presenting each study on perception considerable attention was given to the procedures employed in developing the instruments used, as well as the use of those instruments in collecting student perceptions. This was done because the development and implementation of such an instrument was a major focus of this study.

The Interview in Social Research

Introduction

This section of the review is a presentation of the literature on the interview technique as a tool for social research. With the interview functioning as one of the major data gathering techniques
used in this study, an indepth review of the literature was deemed necessary.

The interview technique has been employed as a data gathering device in many studies of social interaction. Many researchers have discussed the use of the interview in social research. However, most of these discussions have focused on general guidelines for the development and use of the interview with adults. Since the present study concerns children, the focus of this review will be the use of the interview with children.

One writer, Leon J. Yarrow, has presented a most elaborate paper on interviewing children (Yarrow, 1960, pp. 561-602). Yarrow’s paper will function as a major reference and guide in the writing of this section of the review of literature.

The review of the literature on interviewing will have two major foci. The first will be a presentation of a rationale for the interview as a major research technique. The second section will focus on several methodological considerations to be dealt with in interviewing.

A Rationale for the Use of the Interview With Children

The interview technique has been employed by many researchers in the social sciences. Most of the early literature report the use of the interview in clinical studies. Only recently has there been research which employs the interview as a research tool in the social sciences. Some writers (Hyman, 1954; Maccoby and Maccoby, 1954; and
Yarrow, 1960) have given detailed consideration to the use of the interview in social research.

The interview can be employed to obtain many kinds of information. It has been employed as a major technique in conducting polls. Anthropologists and other social scientists employ the interview technique to obtain information concerning tribal customs, family life, sexual relationships, consumer product selection, etc. Many anthropologists and sociologists have written of the significance of the interview as a means of obtaining attitudes, perceptions, and expectations people hold. Cannell and Kahn (1953) write:

"To an increasing degree, however, social science is demanding data which must be reported by individuals out of their own experience. Attitudes, perceptions, expectations, anticipated behaviors are available to the economist, sociologist, psychologists and anthropologist only through direct communication... if the focal data for a research project are the attitudes and perceptions of individuals, the most fruitful approach is to ask the individuals themselves [p. 327-330]."

Yarrow (1960) projects the same attitude in discussing the use of the interview with children by saying:

"The interview is a technique particularly well adapted to uncovering subjective definitions of experiences, to assessing a child's perceptions of the significant people and events in his environment, and to studying how he conceptualizes his life experiences [p. 561]."

A focus of the present study was how students perceived their teacher's classroom behavior. The interview technique was employed as a direct means of identifying the teacher behaviors and events the children perceived as having a major influence on the total class-
Some Methodological Considerations

When the interview serves as a major data gathering instrument in a research study several methodological problems must be confronted. This portion of this review will be a presentation of some of the major problems to be considered when interviewing children.

One of the major methodological considerations is the age of the interviewer. The younger the child, the more limited is his language -- both his speaking and comprehension. In addition the age also effects the role relationship of children and adults as well as motivational characteristics of children at different age levels thus interfering with interviewing techniques.

Some researchers have investigated the language problem in interviewing children. There seems to be a general reluctance to interview preschool children through a direct verbal technique, although the research tends to be meager in this area. Radke (1946) used a direct interview with intellectually superior children just under four years of age and found them to verbalize with extreme clarity and coherence. Ammons (1950) employed doll play in conjunction with the direct interview with children ranging in age from two to five-year-olds. He found that the interview was well adapted for use with children beyond two-year-olds, but that two-year-old children had a high rate of refusals to respond to the interviewer. This rate of refusal to respond ranged from 56 per cent for the two-year-olds to
10 per cent for the five-year-olds.

Yarrow (1960) says that with two and three-year-olds a major language problem is articulation. Two-year-olds are very hard to understand. Metraux (1950) and McCarthy (1930) report that about 30 per cent of the speech of two-year-olds is incomprehensible. However, by three-and-one-half years there is a negligible percentage of language responses which cannot be understood, even though articulation is still poor.

The four-year-old child has not only developed a much more articulate speech pattern but is also much more willing to participate in verbal interaction with an adult. Yarrow (1960) has identified this as a major reason for suggesting that the direct interview can be used most effectively with children four years old and older.

With children under four years old two techniques are often used to obtain complex and subtle feelings and attitudes from children. Horowitz (1943) used a series of pairs of pictures, asking children to select the one they liked best when presented a pair. Another technique very often employed with very young children is the use of doll play (Levy, 1933, 1936; Conn, 1938; Conn and Kanner, 1947; and Bender, 1953).

Several factors other than linguistic ones often interfere with interaction between the child and adult and as such affect the validity of the interview. With children in the middle childhood age range there exist a reluctance to reveal feelings, concerns and attitudes to adults. Yarrow (1960, p. 556) says that unlike the preschoolers who
often think out loud, middle school children often keep their feelings and thoughts to themselves as a defensiveness against upsetting an unstable equilibrium that exists between children and adults.

Another major issue which relates to age is the sex of the interviewer. In the latency period boys' social code requires overt rejection of girls and women. Yarrow (1960, p. 567) reports that there is no conclusive evidence which indicates that the sex of the interviewer influences the responses of boys and girls. Fleming and Snyder (1947) have found that ten-year-old boys did not respond as well to a female as to a male therapist.

In conducting interviews a methodological issue which demands attention is the open atmosphere in which the interview is conducted. The interviewer must be nonjudgmental and accept the child's responses without criticism or threat; and he must display a genuine interest in the child being interviewed. Yarrow (1960) says:

"An interview that probes feeling, attitudes, and deeply personal orientations requires a deeper level of relationship in terms of warmth, sensitivity, and responsiveness than one concerned primarily with obtaining factual data [p. 569]."

If one is to conduct a successful interview he must not only show warmth and genuine concern for the interviewee, he must also minimize the anxiety that the child has when he comes to the interview. One method of minimizing anxiety is to be very thorough in explaining the nature of the interview which is to take place. The interviewer must be explicit in his definition of the situation which is the focus of the interview, and must continue to be supportive of
the child without pressing his ideas on the child (Rogers, 1951; Sullivan, 1954).

Another procedure which has been found very useful in curtailing anxiety is the employment of play materials both at the beginning and throughout the interview. "Trick" gadgets are often useful in shifting the child's attention from himself, thus freeing him to respond more openly. Toys also provide a stimulus to which children can often relate. However, with interviewing older children, toys are of much less use (Yarrow, 1960).

A very successful means of stimulating talk and freeing anxiety in the interview is to have the child bring something which he has created to the interview. Estvan and Estvan (1959) had children to draw pictures prior to the interview. When the children came to the interview, the interviewers discussed the picture drawn by the child. This facilitated an easy transition to the use of the Life-Situation Picture Series which was employed in the interview proper.

Yarrow (1960) discusses the effect the setting has on the anxiety level of the child and the subsequent responses offered by the child. He says, "A quiet room that fosters a feeling of privacy, one free from 'convenient' distractions, will facilitate the interview process [[p. 57]]." Yarrow indicates that when physical arrangements within the interview room impose limits, such as being seated at a table, such arrangements often improve concentration. In addition such arrangements often give the child a feeling of being "protected"
in that the child is separated from the adult by a table.

One methodological problem which has prompted many arguments is the structure of the interview used. Two major camps exist in this argument -- those who favor the standardized interview as opposed to those who advocate the unstructured interview. The standardized interview has been defined by Maccoby and Maccoby (1954, p. 451) as one in which the questions have been decided upon in advance of the interview, and these questions are asked with the same wording and in the same order for all children. The questions may be either convergent or divergent, but the interviewer is not at liberty to vary from the prescribed questions.

The major difference in the standardized and unstandardized interview is that in using the unstandardized interview the interviewer is allowed to make any alterations in the questions as he deems necessary in order to obtain the desired kinds of information (Maccoby and Maccoby, 1954). Many researchers who employ the interview insist that the unstructured interview be employed (Rogers, 1945; Kinsey et. al., 1948). Piaget (1929, 1951) suggest that no predetermined questions be used in the interview, but that the interview be based on spontaneous remarks made by the child.

Some researchers have advocated yet a different type of interview structure. Merton and Kendall (1946) speak of a semi-standardized interview which they call the "focused interview". Such an interview employs an interview guide, but allows the interviewer to vary from it through employing such techniques as probes. The main function of
the "focused interview" is to focus attention upon a given experience and its effects. Although the respondent is free to express his own ideas, the direction of the interview is still in the hands of the interviewer.

Selltiz and Johoda (1959) indicate that the "focused interview" is often called by other names: the "clinical" interview, the "depth" interview; the "nondirective" interview, etc. Selltiz and Johoda go on to say that the focused interview is often used for a more "intensive study of perceptions, attitudes, motivations, etc. than a standardized interview, whether with open or closed questions, permits [p. 263]."

When the focused interview is employed, the "open" question format is most often used. Komhauser (1959) calls the open-ended question a "free-response" question and discusses the significance of the use of such questions. He says:

"The outstanding advantage of the free-response question is that they can provide a more adequate picture of what the respondent has in mind, what is important to him in respect to the topic under discussion, how intensely he feels about it, what the question means to him, within what frame of reference he is answering [p. 427]."

Of major importance to the success of any interview is the construction of interview items. Several social researchers have discussed some general guidelines (Yarrow, 1960; Maccoby and Maccoby, 1954; Connell and Kahn, 1953). However, one of the best guidelines for the construction of the interview schedule, and the one used in this study, was developed by Komhauser (1959). Since this
set of guidelines served as such an important input into this study. Excerpts from it can be found in Appendix A.

The final concern discussed here in terms of methodology is the use of the probe. Very often in conducting an interview there is a need for exploring further certain points made by the respondent. When the interviewer does explore, or probe, these issues he varies somewhat from the interview schedule. Yarrow (1960) says that the probe is often used to clarify or elaborate on a response to a given question. He goes on to say that probes should be natural and without pressure. Rogers (1945, 1951) speaks of the probe as being a nondirective restatement of the expressed content or feelings, ending in a question tone, thus stimulating further response from the child. The interviewer must take extreme caution during an interview to avoid the entrance of interviewer bias into the study.

**Observational Procedures Used In The Analysis Of Teacher-Student Classroom Behavior**

**Introduction**

This section is a presentation of the literature focusing on the analysis of teacher-student classroom interaction. Many researchers have developed observational systems which cover various aspects of classroom interaction. A review which would cover all of these observational techniques could take volumes. Simon and Boyer (1967) have edited a multi-volume report of observational systems. Since there is such heavy attention given to the study of
classroom interaction this review will be a presentation of a few selected observational procedures. The procedures reported will include some of the techniques which have gained considerable attention. There will be a report of structured observational systems used in analyzing verbal statements, and a structured system used to study non-verbal behavior. In addition to the direct classroom observational systems studied this review will also include a report of two selected participation observation procedures.

Direct Observation of Classroom Interaction Using Structured Systems

The study of classroom behavior has centered on the use of direct observational schedules as a means of gathering classroom data. Observational systems have been developed to serve many functions. The development of these observation schedules often poses problems for the researcher.

Medley and Mitzel (1963) have distinguished two approaches to the construction of items for an observational schedule. The first approach Medley and Mitzel referred to as a "category system". In developing a category system the observation is limited to one segment of classroom behavior (i.e. verbal, non-verbal, travel, etc.). Once the segment of classroom behavior has been identified specific units of behavior are defined and set of specific categories are developed into which one and only one of every unit observed can be classified. Such a schedule purports to show the total number of units of behavior which occurred and the number of units classifiable
into each category for any specific period of observation.

The second approach discussed by Medley and Mitzel is a "sign system". Such a system involves listing beforehand a number of specific acts or incidents of behavior which may or may not occur over a given period of observation. Such a record shows which behaviors occurred as well as how frequently each occurred.

One problem which must be overcome in the development of an observational system is the means employed in determining those behaviors that are to be included in the system. Medley and Mitzel (1963) propose that "during the item writing phase the immediate goal is to prepare an adequate supply of potentially useful items without giving much thought to any practical limitations on the number of items that may be used, or how they will be arranged on the observation form or schedule [p. 30]." Several procedures have been used in the item writing phase of system development. Such a list may be prepared by observing several classes and listing those behaviors, by theorizing probable behaviors, or, in the case of the present study, by asking students for examples of teacher behavior.

One of the first studies of classroom teacher-student interaction was conducted by Anderson (1939). The purpose of Anderson's study was to develop, in terms of the concepts of domination and integrative behavior, quantitative measures for observable contacts which teachers had with kindergarten children. Using an accumulation of notes describing teacher-student interplay, and some observations he had just made of similar activities, Anderson designed a pre-
liminary set of categories. During subsequent observations, when a contact was made for which no category existed, a new category was developed. This process evolved into a preliminary set of categories and their definitions. An observation blank was developed and tested by two observers recording simultaneously in a school room. Following each recording each category definition was discussed and the first draft of the system revised. The final form of the observation blank had spaces for biographical data as well as a listing of all of the categories. The blank was devised to contain five minutes of observations. Anderson (1939) pointed out that the establishment of categories was "an arbitrary matter of convenience in recording the teachers' contacts and also a means for a preliminary search for more refined analysis of teachers' behavior [p. 304]."

Not long after Anderson's classical work with observational research Withall developed a similar but less meticulous system for analyzing the social-emotional climate in the classroom. In developing his category system Withall focused on the categorization of teacher statements. Withall (1949) expressed three basic assumptions which served as the basis for his study.

"(1) ...that the socio-emotional climate is a group phenomenon;
(2) that the teacher's behavior is the most important single factor in creating climate in the classroom, and
(3) that the teachers' verbal behavior is a representative sample of her total behavior [p. 347]."

Withall (1949) operationally defined social-emotional climate by saying that it was considered to influence the following:
"(1) the inner private world of each individual;
(2) the esprit de corps of a group;
(3) the sense of meaningfulness of group and individual goals and activities;
(4) the objectivity with which a problem is attacked, and
(5) the kind and extent of interpersonal interaction in the group [p. 347]."

He postulated that "learning" (changes in behavior) was most likely to occur when experiences are both "meaningful to the learner", and "occur in a non-threatening situation".

Guided by the postulates regarding individual motivation and conditions for learning, Withall analyzed teacher statements in order to ascertain whether the teacher was utilizing behaviors likely to create the postulated conditions for learning. Teacher statements tended to fall into twenty-five types. These statements often overlapped and seemed not to be mutually exclusive. The response types were reduced finally to seven categories. Categories 1, 2, and 3 were said to be learner centered; categories 5, 6, and 7 were teacher centered; and, category 4 was a neutral category.

Perhaps the observational procedure most often used in analyzing teacher-student interaction is the Flander's System of Interaction Analysis. Flanders, like Anderson and Withall, was interested in describing teacher influence. Like Withall, Flanders (1965, p. 7) believed that the teacher was the most significant factor in influencing the classroom climate, and that the teacher's verbal communication was an adequate sample of the teacher's total influence.
Flanders discussed teacher influence as being either direct or indirect. Direct influence, Flanders theorized, restricted freedom of action of the student thus making the student momentarily more dependent on the teacher. Indirect influence encouraged student participation and thus freedom of action (Flanders, 1965, p. 7; 1965a, p. 4).

The categories of interaction were selected and designed in an attempt to describe teacher influence. The categories were to be used by an observer to separate those teacher verbal behaviors which result in compliance from those behaviors which invite voluntary participation.

Flanders' System of Interaction Analysis (1967, pp. 103-118) consist of ten categories. Categories 1 through 4 represent indirect influence. Teacher behaviors identified by those categories are: (1) accepts feeling, (2) praises or encourages, (3) accepts student ideas, and (4) asking question. Three teacher behaviors make up the direct influence categories. They are: (5) lecturing, (6) giving directions, and (7) criticking or justifying authority. Two of the categories represent student talk behaviors. There is student talk which is in response to questions or directives from the teacher (category 8) and there is student talk which is initiatory in nature (category 9). The final category of Flanders' System of Interaction Analysis is silence or confusion (category 10).

In his more recent work with interaction analysis Flanders has tended to avoid dealing with the concepts direct and indirect.
The categories of his observational system remain the same; the difference can be found in the broad groupings of different categories. Instead of speaking of direct and indirect, Flanders now deals with teacher talk and student talk. The first seven categories Flanders designates as teacher talk, while categories 8 and 9 are said to be student talk. Flanders makes a further distinction by breaking both teacher talk and student talk into "response" behaviors and "initiation" behaviors. To initiate, according to Flanders, is to make the first move, to lead, to begin or introduce an idea or to express one's own idea. To respond means to take action after an initiation, to counter, or to comply with the expectations of others. Categories 1 through 3 and 8 are response behaviors, and categories 4 through 7 and 9 are initiatory behaviors (Flanders, 1970).

One other category system was selected to represent the verbal observation systems -- the Observational System for Instructional Analysis (OSIA). The system, developed by John B. Hough, and reported at length in a book Teaching: Description and Analysis by Hough and James K. Duncan, is a procedure for analyzing the instructional behaviors and strategies used by teachers in daily classroom interaction with students. The Observational System for Instructional Analysis is a category system developed to test instructional hypotheses generated from learning theory. Hough (1967, p. 2) states that in order to test hypotheses regarding the effect of teacher and/or student behavior on learning in actual classroom settings, means of precisely describing such behaviors are much needed. The
Observational System for Instructional Analysis, Hough believed, could provide such a technique.

The principles of learning employed in the construction of OSIA were drawn from reinforcement theory, because, according to Hough (1967), reinforcement theory is "by its very nature behavioristically oriented [p. 3]." The central thesis of this principle of learning is that if behavior emitted in the presence of a stimulus is contiguously reinforced, it (the behavior) will occur on later presentation of similar stimuli with greater probability than had it not been reinforced.

In the first generation of development OSIA was a 16 category system which was developed to test instructional hypotheses generated from learning theory discussed above. The system was initially developed with a conscious attempt to organize the categories of OSIA so as to parallel the organizational sequence of Flanders' Interaction Analysis. The first five categories described the indirect teacher verbal influence and were labeled: (1) affective clarification and acceptance; (2) praise and reward; (3) cognitive and skill clarification and acceptance; (4) teacher questions; and (5) response to questions. The next four categories were identified as teacher direct influence categories and included: (6) initiates information and opinion; (7) corrective feedback; (8) requests and commands; and (9) criticism and rejection. Three categories were called student verbal behavior categories and included: (10) elicited responses; (11) emitted responses; and (12) student questions. The
silence categories provided for the identification of more behaviors than did Flanders. The categories were: (13) directed practice or activity; (14) silence and contemplation; and (15) demonstration. The sixteenth category was used to identify confusion and irrelevant behavior.

Since the first presentation of OSIA, Hough and Duncan have made many modifications in the system. Instead of being organized around the same themes employed by Flanders (i.e. direct, indirect, student talk, etc.) OSIA now seems to deal more directly with instructional analysis and less with the social and emotional climate.

Hough and Duncan (1970) discuss the revised system at length. This generation of OSIA contains sixteen categories of behavior any one of which can be performed by either the teacher or student. In coding classroom episodes those behaviors which are performed by the teacher are identified by placing a "T" before the category number. Those behaviors performed by students are identified by placing an "S" before the category number. By employing this technique the system can be expanded into a thirty-two category system.

The expanded category system has four major foci. Four of the categories deal with substantive behaviors. Hough and Duncan define substantive as those behaviors which deal with subject matter or content, or with procedures for dealing with substantive content that are directly associated with substantive objectives. Those teacher and/or student behaviors which were deemed to be substantive are: (1) substantive clarification; (2) response to substantive
solicitation; (3) initiation of substantive information; and (4) solicitation of substantive information. Five of the categories fall under the next major heading -- appraisal behaviors. The behaviors identified within this heading are: (5) corrective feedback; (6) confirmation; (7) acceptance; (8) positive personal judgment; and (9) negative personal judgment. Categories 10 through 13 are identical to categories one through four with but one basic difference. The categories 10 through 13 are focused on managerial behaviors. Hough and Duncan define managerial behaviors as those behaviors which deal with managerial content or with procedures associated with meeting managerial objectives. Managerial behaviors facilitate substantive behaviors. Categories 14 and 15 are silence categories. Category 14 is silent overt activity and Category 15 is silent covert activity. The final two categories of OSIA are designated as X and Y. The category identified by X represents instructionally nonfunctional behavior, and category Y is an interaction separation designator. Putting all the categories together with the "T" and "S" indicators OSIA becomes a thirty-two category system for analyzing instruction in the classroom.

The observational procedures reported thus far have focused primarily on the verbal behaviors of teachers and/or students. There have been systems developed which focus on the nonverbal aspects of the classroom. The procedure selected for this review was developed by Galloway (1962) and served as a generating source for studies of teacher-student nonverbal behaviors.
Galloway's study was an exploratory attempt to determine an observational procedure for studying nonverbal behaviors which exist in the classroom. He attempted to determine which of three independent observational procedures was the most useful and valid for obtaining teacher-nonverbal-behavior data. The three observational procedures were employed by three different groups of observers. One group of observers were asked to use a structured observational schedule for tallying the nonverbal behaviors of the teachers. A second group of observers made narrative recordings of the nonverbal behaviors of the teachers. Three judges read these records and made judgments about the influence of each teacher's behavior. A third group of observers who were leaders in the areas of leadership, curriculum and communication observed and assessed each teacher's nonverbal behavior on a continuum from encouraging to inhibiting communication.

The data from the three observers were analyzed for consistency and degree of agreement. Pupil responses to the Davidson-Lang Adjectival Checklist were scored and means were computed for each classroom. Finally, rank order correlation coefficients were computed between the data from each observational procedure and the pupil perceptions reported in the Adjectival Checklist (Galloway, 1962).

The observational system which was developed and analyzed by the procedures mentioned above contained seven categories. These categories focused on nonverbal behaviors of the teacher and ranged on a continuum from encouraging to inhibiting communication. The first three categories Galloway identified as behaviors which
encouraged communication. The behaviors identified were: (1) enthusiastic support; (2) helping; and (3) receptivity. The fourth category served as a vehicle for categorizing communicative acts that existed as a matter of form. Galloway logically called this category "pro forma". The final three categories dealt with behaviors that inhibited communication. The categories which fell into this end of the continuum were: (5) inattentive; (6) unresponsive; and (7) disapproval. Within any one of the categories three major nonverbal foci were identified: facial expressions, action, and vocal language (Galloway, 1962).

**Studies Employing Participant-Observation Techniques**

The observational procedures reported so far in this section have employed structured category systems as a means of collecting teacher-student interaction data. Each of these systems contained certain predetermined categories of behaviors which were to be recorded using a coding technique. The studies reported in the remainder of this section employ participant observational procedures. These procedures differ from structured systems in that the participant-observer records different classroom events without reference to predetermined categories. Very often the participant observer records data in the form of anecdotal notes. The participant observer differs, too, by being part of the daily routine of the classroom in which he is collecting data.

The work done by Smith and Geoffreys (1968) represents an in-
depth study of classroom phenomenon through participant observation. They called their work a "microethnography of the classroom" (Smith and Geoffreys, 1968, p. 3). Their study was an attempt to describe carefully a small social system -- a classroom.

Smith and Geoffreys discuss their study as an "inside-outside" phenomenon. Mr. Geoffreys served as an inside "participant" observer in that he was the full time teacher of the classroom under study. Smith was the outside "non-participant" observer in that he merely observed in the class but had no direct authority in the classroom.

Geoffrey's role in the study was primarily to function as the classroom teacher. He did keep various records throughout the day. Some of these records were simply those reported in his teacher-plan-book. In addition, he also kept stenographic summary notes on daily events of the classroom. These were usually prepared in the evening reflecting on brief notes he had collected during the day.

Smith's role in the study was that of a non-participant observer. He was present each day and stationed himself so that he could see most of the classroom interaction. He did not intervene in classroom activities at any time. Rather, he kept detailed field notes of his observations of the classroom.

Basically, Smith kept three kinds of records. (1) A longhand record of classroom events reporting on the behavior of the teacher, the students, or others who happened into the classroom. In addition, Smith also recorded insights, inferences, and interpretative comments that occurred to him as he watched. (2) A second set of records
entitled "Field Notes: Summary Observations and Interpretations" was recorded on a tape recorder as he drove to and from school. These notes were usually reflections of events in the building as a whole.

(3) The third set of records were documents including papers given to students in class, occasional work samples, sociometric and other tests, notes from parents, etc. (Smith and Geoffreys, 1968, p. 12). In all of Smith's record keeping he refrained from talking with anyone about the classroom events until after he had recorded them. "Talking", says Smith (1968), "...seemed to take the edge off of reporting the incident in the notes [p. 13]."

In an attempt to analyze the field notes collected during their study, Smith and Geoffreys (1968) followed what they termed a "microethnographic" procedure for studying decision-making processes. The procedure is as follows:

1. Read through and stop at each 'insightful' comment or interpretation.
2. Abstract verbatim the incident precipitating the insightful comment and the data of occurrence.
3. If possible, elaborate the significance and implications of the incident.
4. Feed the incident (No. 2) without the insight (No. 1) or the elaboration (No. 3) to Mr. Geoffrey. Ask for reasons concerning his behavior or his perception of others' behavior.
5. Later, if desirable, feed the incident plus insight and elaboration for further commentary.
6. Later, reread jointly each others' comments and talk additional interpretations into a verbatim record.
7. Include an occasional incident that seems innocuous to keep the other honest [p. 15]."

The final observational technique reported on in this section
of the review is another of the participant observation procedures. This procedure was employed by Phillip Jackson. The focus of Jackson's study was exclusively on what happens in elementary school classrooms. Classrooms in the Lower School of the University of Chicago Laboratory School constituted the sample for this study.

Working from an interest in the social realities of school life, Jackson made several visits to the classrooms in the Laboratory School. He sat in the back of the classrooms making notes on the classroom social phenomena. In addition, Jackson often sat with many of the teachers discussing their classrooms and questioning them about various aspects of the class. Jackson reported his perceptions of the social structure of the classroom in a book titled *Life In Classrooms* (Jackson, 1968, pp. 1-176).

**Summary**

This chapter has been an exposition of literature in each of three areas: social perception, interviewing in social research, and observational procedures used to analyze classroom phenomenon. This review in no way purports to cover all of the literature in any one of the areas. Rather, certain writings were purposely selected as examples of significant contributions to each respective area as they relate to the present study. The remainder of this summary will be a presentation of some of the most significant conclusions reported in the studies reviewed. These conclusions will be reported under three headings: Perception, Interview, and Observational Procedures.
Perception

1. The more knowledge an individual has concerning the intentions, preferences, and beliefs of other persons, the more effective he is at participating in communication with the other person. This is particularly true of teacher-student relationships in classrooms.

2. All behavior is a product of the perceptual field of the perceiver at the moment of action.

3. Perception is dependent upon the individual nature of the perceiver, and is indicative of the purposiveness upon which percepts are formed.

4. Social perception involves other people whose purposes have the potential influence on one's purposes.

5. Perception is selective in nature. One is bombarded with many stimuli and selects only those which have definite meaning for him.

6. Perception can be viewed as an act of categorization in that whatever is perceived is placed in and achieves its meaning from a class of percepts with which it is grouped.

7. In perception nonverbal cues have very strong meaning to the perceiver even though the sender is unaware of their effects.

8. The concepts "attitude" and "judgment" are often associated with perception.

9. Many research procedures have been employed in attempts to determine how people perceive other people in their environment. Among them are: questionnaires, projective techniques employing pictures and doll play, interviews, and direct observation, etc.

Interview

1. The interview is a technique particularly well adapted to assessing a child's perceptions of the significant people and events in his environment.

2. Language barriers (insufficient vocabulary, lack of articulation, etc.) often pose a problem in interview research.
3. The age of the interviewer and interviewee impinge upon the success of the interview as a research tool.

4. The sex of the interviewer has been found to interfere with the interview results.

5. An atmosphere of warmth and genuine concern must be present if one is to conduct a successful interview.

6. Probing has been found to be a highly effective means of obtaining additional desired information.

7. Interview items must be developed with extreme caution and concern.

Observational Procedures

1. A basic difference exists between a sign system and a category system within an observational procedure.

2. Early studies in classroom observation focused mainly on verbal statements made by teachers.

3. Nonverbal behaviors have been found to play a significant role in teacher-student interaction. Procedures have been developed for studying such nonverbal behaviors.

4. Instructional study and learning theory has played a major role in the construction of many observational procedures.

5. The participant observer can often identify more subtle nuances that occur in the classroom than a non-participant observer.

6. Valuable information concerning classroom phenomenon can be gleaned without focusing on any predetermined criteria.
CHAPTER III

PROCEDURES

Introduction

This study was conducted in an attempt to clarify several concerns relating to analyzing teacher-student classroom interaction. The major purpose for the study was to determine if an observational system for analyzing teacher classroom behavior could be developed by using student perceptions of their teachers as the source of data. In developing such an observational system the notions of reliability and validity must be confronted. A second focus of this study was the procedures employed to ascertain the reliability and validity of the observational system developed herein.

This chapter is a presentation of the procedures employed throughout the study. Some attention will be given to the development and pilot testing of a questionnaire-interview-schedule (hereafter referred to as questionnaire) used to collect student perceptions of their teachers. The major portion of this chapter will be devoted to an exposition of the procedures involved in collecting the students' perceptual statements (Phase I); treatment of the student perceptual statements -- the process by which the student perceptions were collapsed into categories (Phase II); the Q methodology employed to
obtain a measure of construct validity (Phase III); and the training of observers in the use of the observational system with resulting measures of inter-rater agreement (Phase IV).

**Development and Pilot Testing of the Questionnaire**

The instrument used to collect the student’s perceptions of their teachers was a "focused" questionnaire. In developing such an instrument for use with young children several concerns must be entertained. Among those concerns are: What are to be the foci (constructs) of the items in the instrument? With what population is the instrument to be used? Is the language of the instrument appropriate for the age level?

The questionnaire was developed to use in gathering students' perceptions of their teacher. The items in the questionnaire focused on constructs which came from existing observational systems and research on characteristics of good teachers. These questions were then analyzed by Dr. Edgar Dale, a noted authority in children's language. Dr. Dale was requested to identify words which might be deemed too difficult for children. The instrument developed to this point contained sixty items.

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4The procedures presented in this section represent a general sketch of the actual procedures employed in the development and pilot testing of the questionnaire. A much more detailed description of those procedures can be found in Appendix I.
The sixty item instrument was then field tested with children the same age as those to be used in the study proper. During this field testing the questions were presented to the children both as questionnaire and then as an interview. Following each administration of the instrument changes were made in the original items. These changes were made in order to insure that the children could understand the questionnaire items and make rational responses to them. The instrument which evolved from the field testing contained 25 items, each concerned with collecting students' perceptions of their teachers.

With the questionnaire being refined through the field testing procedures, a pilot test was conducted to ascertain the degree of reliability and validity of the measures obtained by employing the instrument. The population used in the pilot testing consisted of sixth-grade students in a public school system in western Kentucky. These children were involved for three special reasons. First, they were of the same age as the students involved in the study proper. Secondly, the organizational pattern of the school most closely approximated the organizational pattern in the school system used in the study. Third, the students had had the same teacher the previous year. This last reason was very important in that the pilot testing was done at the beginning of the school year. Since responding to the questionnaire required the students to know their teacher well, their having had the same teacher the previous year supplied them with the information necessary to respond to the questionnaire items.
Two classrooms of students were used in the pilot study, one at 8:00 and one at 1:00. The students were first presented the questionnaire as a questionnaire. The next day five students were randomly selected from each classroom to participate in an interview. Each of the five students was interviewed individually with the questionnaire being employed as the interview schedule. These interviews were audio-taped with the responses being transcribed to a questionnaire. One week following the interviews the questionnaire was again presented to all the children in each of the classes. This concluded the procedures employed in the data collection for the pilot testing.

Once all the pilot test data were collected, procedures were employed to obtain measures of reliability and validity. The students' perceptual statements were first converted to a quantitative form. Once in quantitative form three measures of reliability were obtained using the Kuder-Richardson 21 formula. The three types of reliability coefficients were: pretest internal consistency, retest internal consistency, and audio-taped internal consistency. The reliability coefficients obtained were considered very conservative but sufficient for the purposes in this study.

The validity of the measures obtained by employing the questionnaire was argued on the basis of the ability of the questionnaire to solicit rational responses from the students. In addition, the Cochran Q-Statistic was applied to the data in an attempt to ascertain the difference in the degree of difficulty of the question-
naire items.

The procedures discussed thus far have focused on the development and pilot testing of the questionnaire. The results of these procedures indicate that the questionnaire is a sufficiently reliable and valid instrument that can be used to collect students' statements of their perceptions of their teachers. The remainder of this chapter will be a presentation of the procedures in the four phases of the study proper.

**Procedures Used In the Study Proper**

**Introduction**

The procedures discussed up to this point were focused on the pilot study. Due to the exploratory nature of this study it was necessary to conduct a very rigorous pilot of the study. This provided for an indepth analysis of the notions of reliability and validity. It also provided this researcher the opportunity to better learn the methodologies to be employed in this study.

The remainder of this chapter outlines procedures used in collecting the student perceptions: (Phase I); treatment of the student perception -- the process by which the student perceptions were collapsed into categories (Phase II); the Q methodology employed to obtain a measure of construct validity (Phase III); and the training of observers in the use of the observation systems, with resultant measures of inter-rater agreement (Phase IV).
Phase I: Population Definition and Procedures Used to Collect Student Perceptions

This study was conducted in a public school system in western Kentucky. The system was chosen in order to minimize the linguistic and dialectical differences that might exist between this researcher and the students interviewed. The organizational structure of the schools was very similar to those selected for the pilot study. The upper elementary grades were of a middle-school-quasi-departmentalized organizational pattern. The students were with the same teacher for a minimum of two and one half hours each day. This contact provided enough time for the students to become well acquainted with their teachers.

The classes used in the study were sixth-grade classes. There were twelve classes selected for this study. The classes were randomly selected from a frame of twenty-five such classes. The teachers of those classes had expressed an interest in participating in the study after this researcher presented the proposal to each of the middle schools in the system. Table 1 presents information related to the classes selected for the study.

The students' perceptions of their teachers were obtained much the same as they were in the pilot study. In the fall of 1972, the questionnaire was administered to all 360 students by this researcher and a research associate. (This researcher taught the research associate how to administer the questionnaire.) The questionnaire was administered to the students in each class. The questionnaires
TABLE 1

NUMBER OF CLASSES PER SCHOOL, NUMBER OF CLASSES SELECTED, AND NUMBER OF STUDENTS FOR THIS STUDY

<table>
<thead>
<tr>
<th>School</th>
<th>Number of Classes Selected</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
<td>88 (29, 28, 31)</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>118 (29, 28, 30, 31)</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>154 (32, 28, 31, 31, 32)</td>
</tr>
<tr>
<td>Totals</td>
<td>12</td>
<td>360</td>
</tr>
</tbody>
</table>

were administered in the same classrooms and at the same time that the students met for the class each day. The teachers were asked to leave the room and the questionnaires were administered over an one hour period. In this way the effects of extraneous variables (i.e. familiarity with environment and the time factors) were minimized.

The students were assured that the responses they gave would be seen by no one other than this researcher and an assistant. They were requested to be as truthful as possible when responding to the questions. As the questionnaire was administered difficult words were spelled for the students. In addition, clarifications were given which enabled the students to answer the questions.

One month after the questionnaire was administered as a questionnaire this researcher and his research associate conducted
interviews using the questionnaire as an interview schedule. Five students were randomly selected from each class to participate in the interviews. Letters requesting parental consent were sent to the parents three weeks prior to the interviews. A copy of the letter sent to the parents can be found in Appendix H. Twenty-seven boys and thirty-three girls were selected for the interviews.

Each interview was conducted in a counseling room with only the interviewer and the student present. The students were notified of the confidential nature of the interviews. They were told that no one would see or hear their responses except the interviewer and an assistant. The interviews lasted from ten to twenty-five minutes depending upon the respondent. During the interview prompting was used by the interviewer when needed to facilitate student responses. (The "prompt" is discussed at length in Appendix I.) Nonverbal cues displayed by the students were observed by the interviewers. (The importance of noticing nonverbal cues during interviews is also discussed in Appendix I.) After each student left the interview session notes of the nonverbal cues were made.

The interviews were audio-taped. Prior to the taping, trial runs were made on the tape recorder. These were conducted in order to familiarize the student with the tape recorder and to ease any

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5The research associate was taught the interview techniques by this researcher. Prior to conducting interviews herself, she observed this researcher conducting interviews as well as listened to several tapes made of such interviews.
apprehensions they might have about taping their voices. At the conclusions of the interview a portion of the tape was played for each student.

**Phase II: Treatment of the Student Perceptions**

The student perceptions were collected by employing a questionnaire and through interviews by this researcher and a research associate. The perceptual statements thus collected had to be analyzed and put into some usable form.

In order to better understand the overall nature of the student perceptions of each teacher the responses obtained by the questionnaire when used as a questionnaire were placed on three-by-five inch note cards. Each response card was then sorted under the question which served as the prompt for that response. Response duplications were thrown out but a tally for each response was kept. The remaining responses were placed on one of the questionnaire forms. These forms were then labeled as "questionnaire-class-master-keys". This entire process was replicated for each class involved in the study.

The pupil perceptions obtained by using the interview technique were transcribed from the audio-tapes to questionnaire forms. (A copy of a transcribed interview will appear in Appendix D.) One such form was prepared for each student. The pupil perceptions for each class were then collapsed into an "interview class master key". Each response was placed on a three-by-five inch note card. The response cards were then sorted under the question which served as the prompt
for that response. Response duplications were thrown out, but tallies for each response were kept. The remaining responses were placed on one of the questionnaire forms and labeled as "interview class master keys". (A copy of both a questionnaire and an interview class master key will appear in Appendix B and C respectively.)

Once both questionnaire and interview class master keys were developed for each class, these keys were further collapsed. All the responses for each question (both questionnaire and interview responses) were analyzed. Duplications of each response, for a particular question, were thrown out but tallies of those responses were kept. The remaining responses were placed under the questionnaire item that served as the cue for that response. This process was repeated for each of the questionnaire items, with the result being a "collated study key" which contained every response given for each question, whether given as responses to the questionnaire or in the interview. (A copy of this "collated study key" can be found in Appendix E.)

With the completion of the "collated study key" the next step in the study was the analysis of the responses with the goal being the formation of categories of teacher behaviors inductively derived from student perceptions of teachers. The "collated study key" was the only source of student perceptions consulted in this undertaking since the key contained examples of all the responses to each question in the questionnaire.

The pupil perceptions were first analyzed by studying them in
relation to the context with which they were associated (i.e. the questionnaire item). This preliminary analysis revealed a very important piece of information. Even though all the student responses given related to teacher behaviors, the responses offered for some of the questions were of no value in the construction of the desired observational system. For example, the responses to the question, "Where in the classroom does your teacher spend most of her time?" were of little value in the construction of the desired observational system. Although one can, in fact, observe teacher travel, it is difficult to code that travel using numerals in a category system. Such behaviors could easily be coded in a sign system however. The same reasoning would apply to the question, "Does your teacher ever think anything is funny?" What sorts of things does she think are funny? What does she do when something is funny? If one were attempting to study what kinds of things the teacher thought was funny a sign system could be employed, or better still a simple listing. The category system could work, however, in analyzing what the teacher did when she thought something was funny.

The next step in the analysis of student perceptions appearing in the "collated study key" required that each perceptual statement be thoroughly studied. As each perceptual statement was analyzed seven specific criteria were used:

(1) Is the perceptual statement in terms that are too vague to be used to make inferences of teacher intent or behavior?
(2) Is the reported behavior ambiguous?
(3) Is the reported behavior a teacher behavior?
(4) Could this teacher behavior logically occur in the context of that question?
(5) Could this perceived teacher behavior be observed by someone other than the student making the statement?
(6) Could this perceived teacher behavior be observed by an outside observer in a single sitting not to exceed one hour in duration?
(7) Can a behavior descriptor be associated with the perception being studied?

When the first of the above questions were applied to the perceptual statements several of those statements were eliminated. For example, the responses, "talks to you about it" and "makes things fun" to the question, "What does your teacher do to make you pay attention?" would be eliminated because of their vagueness. If these two responses had been included, the following questions might be asked by someone being taught the system: "What is 'it'"? "How does the teacher 'make things fun'?" or "What 'things'?"

The second question dealt with the ambiguity of the perception reported. For example, when the question, "How can you tell when your teacher is not listening to you?" was asked such ambiguous responses as, "She looks out the window," or "She stares into space" were made. They are ambiguous in that it is difficult to ascertain whether the teacher was actually listening. The teacher may, in fact, listen and "stare into space" at the same time.

Several of the perceptions reported by the students were not statements of teacher behavior, rather, they were reports of their own behavior. If the statement given by the student did not report a teacher behavior it was of no value since the observational system.
being developed focused on teacher behaviors. When the question, "How do you know when your teacher is happy with what you've done?" was asked, several statements of behaviors which were student behaviors rather than teacher behaviors were given. Some examples of such responses are: "When you are not doing the wrong things," "Like if most of the class made a 100% she is happy," or "When you do something all right." Surely these perceptions were important to the student, but since they did not focus on teacher behaviors they were of little value in this study.

There were some student perceptions that were not rationally possible behaviors for the teacher to exhibit within the context of the question. Most of these statements were recognized and deleted before the "collated study key" was developed. Some of the responses were omitted simply because they did not answer the question. If the response, "I don't know" occurred it was not included in any key. Some students responded "Outside in the hall flirting with the other teachers" when asked, "Where in the classroom does your teacher spend most of his time?" Such a response did not meet the criteria called for in the question (i.e., in the classroom). Since the response did not meet the criteria of the question it was discarded.

Several of the statements of perceptions offered by the student could not be observed, at least in one sitting. Some of the teacher behaviors would not occur because the teacher would guard against them while an observer was present. Several of the punitive behaviors used by the teacher would occur in this category. Some of
the behaviors probably would not occur regardless of whether someone else was in the classroom. For example, some students responded inappropriately to the question, "What does your teacher do when you give a wrong answer?" One such inappropriate response was, "Tries to crack your face" and being judged inappropriate that response would be omitted. Other responses were omitted simply because the behaviors which prompted the perception were cumulative in nature. For example, such responses as, "Tries to encourage us to learn," "He asks us a lot of questions about something hard," or "She trusts us" are perceptions built on the accumulation of several behaviors. In examples such as those just stated no one single teacher behavior was identified to indicate those perceptions.

The last of the seven concerns dealt with in analyzing the student perceptions was the assigning of descriptors to the statements. Several different descriptors were originally ascribed to the perceptual statements (there were 63 in all). These descriptors came from many sources. The major source was category names of existing observational systems. Other terms came from references to observational systems in sociology and psychology. Still other descriptors were simple dictionary terms that seemed to "fit" the perception.

After the entire list of perceptions had been assigned a descriptor, those terms used as descriptors were clustered in an attempt to group like terms. This was done by looking both at the terms and the perceptions associated with them. Whenever possible
the descriptors were collapsed into similar categories under one cluster heading, or in some instances, two or three descriptor headings. This clustering procedure led to the condensing of the 63 original terms into 12 categories of teacher behavior. These 12 categories served as the categories for the observational system, the development of which was the major focus of this study. (The categories, developed by collapsing the student perceptions, and examples of student perceptual statements being clustered into the categories can be found in Appendix F.)

Following the identification of the categories and the student perceptual statements which clustered into the categories one other step was taken in the Phase II treatment of the student perceptual statements. All of the student perceptual statements made in response to the questionnaire and/or the interview were sorted into the category which was most closely descriptive of that teacher behavior. This procedure was repeated for each classroom involved in the study. The total number of statements appearing in each category in any classroom was tabulated. These totals were then converted to percentages. This procedure provided a clearer understanding of the types and amounts of teacher behaviors identified by students as being very important.

Phase III: The Q Methodology Employed to Obtain a Measure of Construct Validity

Once the categories had been derived and defined an issue
which required further investigation was the construct validity of the categories. The fact that the basis for the categories came from students (i.e. student perceptions of teachers) provided a great deal of construct validity. If the responses given by the student were their true perceptions -- and there is no reason to doubt that they were not -- then it is fair to assume that, at least from the student perspective, they are valid. In addition, the procedures employed in collapsing the perceptions into categories eliminated several "invalid" responses. However, some validity might have been lost in assigning category descriptors to the perceptual statements.

In an attempt to ascertain some notion of the validity of the categories composed of student perceptions, a panel of judges was asked to sort the perceptions into the categories developed by this researcher. It was believed that if a significantly high degree of agreement (a minimum of .65) existed between the judges and this researcher, the arguments for construct validity of the categories would be better supported. The panel of judges consisted of four professors from The Ohio State University, and four professors from other universities. All members of the panel of judges were considered to be "experts" in the field of observational research.

Each of the judges was provided the following materials needed for conducting the sorting:

(1) A list of the categories, each with its respective definition
(2) An envelope which contained 189 slips of paper, on each of which appeared the name of a separate category
(3) Twelve cards, on each of which appeared the name of a separate category
(4) Twelve envelopes, on each of which appeared the name of a separate category
(5) The directions for conducting the sort

(A copy of items 1 and 5 above appear in Appendix G.)

The judges were directed to read each student perceptual statement and then assign that perceptual statement to one of the categories provided. After going through all the perceptions, the judges were then asked to place each category and its respective student perceptual statements into the envelope with the same category name. They were then to return all the envelopes to this researcher.

In order to convert the sorted responses to quantitative data, a key was developed. The key consisted of the twelve categories developed by collapsing the student perceptions, and the perceptual statements assigned to each category by this researcher (A copy of this key will appear in Appendix F). The sortings done by each of the judges were scored using this key. If the judge had assigned a statement to the same category as this researcher, the judge received a score of +1 for that statement. If the judges' sorting did not match the sorting of this researcher, the judge's sorting of that statement received a score of 0. When all of the statements in all the categories had been scored a histogram was developed for each judge depicting the frequency of sorted statements (that agreed with this researcher) for each category. The scores which appeared on the histogram were then statistically analyzed by using the following
formula for obtaining a measure of the percentage of agreement between the judges' sorting and this researcher's.

\[
\text{Percentage Of Agreement} = \frac{\text{Number of identical statements which the researcher and judge place in a given category}}{\text{Number of statements which this researcher places in same category}}
\]

Phase IV: Training of Observers to Use the Observational System and Resultant Measures of Inter-Rater Reliability

An observational system is of very little value if it can not be taught to others so that they can use it either to analyze their own in class behaviors or the behaviors of other teachers. As a final step in the construction of this observational system procedures were developed and followed for teaching others to use the present system. The focus of the procedures for teaching the system was not on how quickly the system could be taught, nor what devices could best be employed in teaching the system. Rather, the goal was to teach observers to use the system so they could reliably code a teacher's classroom behavior.

Two graduate students studying in the field of curriculum and instruction and a classroom teacher were taught the system. Through a discussion format the trainees (hereafter called "observers") were presented the categories and their respective definitions. Examples of behaviors that might fall in each category were presented to the observers. These examples served as conventions for each category, and, in many cases, were those pupil perceptions used in the sorting
procedure conducted by the panel of judges. Video tapes of elementary classroom teacher-student interaction were also used in the training process. In addition the video tapes were also used as practice tapes by the observers in order to become more proficient at coding classroom interaction using the system being developed in this study.

The guidelines for coding the tapes were as follows:

1. Code only teacher behaviors
2. Code verbal and/or nonverbal behaviors
3. Code behaviors following, as nearly as possible, the conventions discussed during the training sessions
4. Code one tally every five seconds unless there is a rapid changing of behaviors, in which case, code as often as the behavior change occurs.

Two criteria served as indicators of the readiness of the observers to code video tapes for the purpose of obtaining a measure of inter-rater-reliability. The first cue was oral and visual feedback from the observers during the training process. As a second cue, the observers were asked to sort the student perceptions (conventions of the system) in the same way as did the panel of judges (this process was discussed earlier in this chapter). This gave some assurance that the observers understood the conventions used in the system. The desired percentage of agreement needed before an observer was deemed ready to code for inter-rater-reliability was .70.

In order to obtain measures of inter-rater-reliability the observers coded ten minute uninterrupted segments of five separate video tapes of sixth-grade classroom interaction. The video tapes were of different teachers or student teachers teaching in the sixth-grade. All of the coding took place at the same time and in the same
room. The observers were to follow the same guidelines that they had learned in the training sessions (see above).

At the conclusion of the coding, histograms of each observer's coding of each tape were constructed. The data reported in each histogram were analyzed by using the Cohen coefficient of inter-rater-agreement. The formula is:

\[ K = \frac{P_o - P_e}{1 - P_e} \]

Where:

- \( P_o \) = the percent of agreement between two observers
- \( P_e \) = the sum of the cross products of each category

In calculating the Cohen coefficient of inter-rater-agreement each observer's coding was compared to this researcher's coding. This researcher coded at the same time observers coded, and histograms of the researcher's coding were constructed in a similar fashion.

**Summary**

This chapter has been a presentation of the procedures employed in this study. The study was an attempt to ascertain whether an observational system could be developed with categories evolving from students' perceptions of their teachers.

If an observational system is to be developed from students' perceptions of their teachers the first major concern was the development and pilot testing of the instrument and procedures employed to collect the student perceptions. The procedures followed in developing
and pilot testing of a questionnaire were discussed briefly in this chapter with a more detailed discussion in Appendix I.

Once the questionnaire was developed and pilot tested the population was identified for the study proper. Twelve classrooms constituted the population sample for this study.

The students in each of the 12 classrooms were first requested to respond to the questionnaire as a questionnaire. Following the administration of the questionnaire five students were randomly selected to respond to the questionnaire during an audio-taped interview. These two data gathering procedures constituted the means by which the students' perceptions of their teachers were collected.

The student perceptual statements were then analyzed to determine which of the statements were rational and usable in developing the desired observational system. The perceptual statements which remained after the initial analysis were then assigned category descriptors. The category descriptors were clustered in order to obtain a more usable observational system.

Once the category system had been developed the categories, along with selected perceptual statements, were subjected to a sorting procedure by a panel of judges. Eight experts in the field of observational systems were requested to sort the selected student perceptual statements into the categories of the observational system. Percentages of agreement were computed by comparing the judges' sorting with the sorting performed by this researcher.

The final procedure employed in this study involved training
of observers in the use of the observational system. Four observers were trained in the conventions of the observational system developed herein. When this researcher was confident that the observers had learned the system sufficiently the observers were requested to observe and code six video-taped teaching episodes using the system. Cohen coefficients of inter-rater agreement were computed on the codings.

A flow chart of the procedures used in the study proper appears on the following page.
**PROCEDURES USED IN STUDY PROPER**

### Phase I
**Population Definition and Procedures Used to Collect Student Perceptions**
- Selection of Population
- Administration of Questionnaire as Questionnaire
- Selection of Children to be Interviewed
- Acquisition of Parental Consent
- Interviews with Children

### Phase II
**Treatment of Student Perceptions**
- Placing of Student Perceptual Statements on Note Cards
- Development of "Questionnaire Class Master Keys"
- Transcription of Interviews
- Development of "Interview Class Master Key"
- Development of "Collated Study Keys"
- Analysis of Statements and Assignments of Descriptors
- Collapsing of Descriptors into Categories

### Phase III
**The Q Methodology Employed to Obtain A Measure of Construct Validity**
- Selection of Statements For sorting by Judges
- Identification of Judges
- Providing Judges With Sorting Materials
- Scoring of Judge's Sortings
- Calculation of Percentages of Agreement between Judges and Investigator

### Phase IV
**Training of Observers to Use The Observational System and Resultant Measures of Inter-Rater Reliability**
- Selection of Observers to Train in the Use of The Observational System
- Selection of Appropriate Video-Tapes for Training and Coding
- Training of Observers In The Conventions of The Observational System
- Coding of Selected Video-Taped Teaching Episodes
- Calculation of Cohen Coefficients of Inter-Rater Reliability
CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Introduction

This study was an attempt to determine whether an observational system for analyzing a teacher's classroom behavior could be developed by using student perceptions as a source of data in constructing the categories. The study had two major phases. The first phase was the development and pilot testing of an instrument and the data gathering procedures (the questionnaire and the interview methodology). The second phase focused on the collection of data for the study and the treatment of those data in generating a category system. The second phase also involved specific procedures to ascertain the validity and reliability of the category system.

This chapter of the study will focus primarily on the data of the second phase. However, some very brief attention will be given the nature of the reliability and validity issues covered in the first phase. The reporting of the pilot test data will be evidenced throughout the chapter, with particular emphasis provided in the first part of the chapter.

There were four major questions which served as the focal points for this study. Those questions are stated as follows:
1. Can a valid and reliable procedure be developed to collect pupils' perceptions of teacher's classroom behavior?

2. Can teacher behaviors identified by students be collapsed into categories that can be used in the analysis of teacher-classroom-behavior?

3. To what degree will a panel of judges agree on the assignment of pupils' perceptions to prescribed categories of teacher behavior?

4. Can an observational system which was developed from pupils' perceptions of their teacher's behavior be taught to observers to such an extent that they can observe and code ten minute episodes of video tapes of a teacher's classroom behaviors?

A presentation and analysis of the data with respect to each of the four questions mentioned above will be included in this chapter.

This chapter will be divided into three major sections. The first section will contain a discussion of the nature of the student's perceptual statements, and examples of those statements. Also included in this section will be a presentation of the categories which evolved from the pupil's perceptual statements. The second part will be a discussion of the agreement of the panel of judges in their attempts at sorting student perceptions into categories. The final section will be a presentation and analysis of the observer codings of video tapes of teacher behavior using the category system developed in the study.

The Nature of the Perceptual Statements

Teachers are continually being perceived in many different ways by their students. Researchers have never questioned this. What has been questioned, however, is whether students could verbalize
the richness of their perceptions. Many teachers have remarked in the past, as did teachers involved in this study, that students cannot recognize "significant" teacher behaviors, and even if they could they could not deal with the abstract nature of the significance of such behaviors. Often when the teachers involved in this study were shown the questions the students would be asked, the teachers remarked that their students "could not answer them."

The issue that these and many other teachers failed to recognize is that children do, in fact, form very high level perceptions of their teachers. It is true, however, that children had to be prompted to obtain answers to the questions being asked. The following discussion contains several examples of the perceptual statements provided by the children. These statements are offered as evidence that children can, in fact, report their perceptions of their teacher and that a procedure can be developed to collect those perceptions.

Many of the questions contained in the questionnaire dealt with the affective dimensions of the classroom. These dimensions appeared often in research on characteristics of good teachers. (Biddle and Ellena, 1964; Combs, 1965; Stern, 1963; Hamachek, 1971) There was, however, some attention given to the cognitive instructional strategies used by teachers.

One of the most interesting areas, in terms of pupil responses, dealt with clues given by the teacher which signified whether she was listening or not listening to the student. Two questions concerning
teacher attentativeness were asked the children. The first of these questions was, "How do you know when your teacher is listening to you?" The responses to this question covered a wide array. However, one response continually occurred -- "she looks at me." Some students were even so emphatic as to say, "She looks me straight in the eye!" Many of the students responded by saying, "She doesn't talk while I talk." Still others responded by saying, "She waits until I stop talking then she talks." Closing distance seems to be recognized by many students as something the teacher does when she is listening to them. They say things like, "She comes to me," "She leans my way," or "She walks around us." Several of the students said that the teacher nods her head or says things like, "O.K." as they (the students) talk.

Some of the students identified more subtle cues. They reported that the teacher "gets very still" or "Stops what she is doing" when she is listening to them. It was in response to this question that one of the most perceptive statements given by a student occurred. One student responded by saying, "The teacher doesn't always agree with me when she is really listening." This statement is indeed abstract for it is quite hard for a teacher to fail to listen to a child and disagree with what the child has said.

The opposite of many of the above statements were offered by students in response to the question, "How do you know when your teacher is not listening to you?" Such statements as, "She doesn't look at me," or "She is talking to someone else," were quite common.
Many of the students commented that the teacher, "Goes on with her work," when she isn't listening to them. Some students responded that the teacher simply, "Doesn't give you the answer you asked for," when she isn't listening. Other students commented that the teacher often put them off when she did not wish to listen to them. The students identified such things as the teacher saying, "Tell me after school," or saying, "I'll tell you later," as being "put-off" statements. Still some of the students indicated that the teacher simply, "Seemed real far away," when they were talking to her.

The responses to these two questions clustered into two respective categories. Those perceptual statements of teacher behavior which were reports of cues that the teacher was listening clustered into the category called "Active Listening, Assisting, Focusing Attention." The responses which served as reports of cues that the teacher was not listening were clustered into a category called "Denies, Avoids, Ignores."

The responses to two other questions were also often clustered into the two categories just mentioned. The questions dealing with whether the teacher did or did not understand what the student was trying to say often prompted reports of teacher behavior which was viewed by the student to be either assisting and focusing attention or denying or ignoring.

When students were asked, "If you ever had to explain something to your teacher, how would you know if she really understood you?" their responses often fell into the category called "Active Listening,
Assisting, Focusing Attention." Some examples of responses to this question are: "She tells me what I want to know," "She nods her head and says 'yes'," "She helps me," "She asks me other questions about it," and, "She says something that sort of sounds like what I have said." As was indicated above, these responses very closely resemble those given when the students were asked how they knew when the teacher was listening to them.

When the students were asked, "How do you know when your teacher doesn't understand you?" the responses tended to fall into three different categories. There were those student statements which clustered into the category called "Denies, Avoids, Ignores." Such statements as, "The teacher has me to repeat what I said about five times," or "She tells me to talk to her later about it," were viewed as statements of ignoring behaviors. Secondly, some of the student perceptual statements in response to the question, "How do you know when your teacher does not understand you?" were clustered into a category called, "Seeks Clarification." Examples of perceptual statements of teacher behaviors which fell into this category are: "She says, 'I don't understand'," "She tells me to explain it in different words," and, "She asks you to repeat what you just said." Several students reported nonverbal cues given by the teacher when she did not understand and wanted additional information. For example, several students said that the teacher "had a puzzled look on her face." Some students reported that the teacher either "Shrugged her shoulders," or, "Raised her eyebrows when she did not understand and wanted more
Still other responses to the question "How do you know when your teacher does not understand you?" were clustered into a third category called, "Attacks, Belittles, Ridicules." A few of the students said that sometimes when the teacher failed to understand them they (the teacher) just, "Yelled at me and told me to go sit down." Some of the students reported that the teacher, "Stared at them real hard with a mean look," if they could not understand something. Still other students would say, "She points at me and tells me I am wrong but she really doesn't know what I was trying to say."

One of the areas of major concern in the development of the questionnaire was whether pupils could relate their perceptions of teacher behavior which fostered or deterred the development of their (the pupils') self-concept. Those who have written about self-concept tend to agree that the self-concept is learned by the child perceiving himself in relation to the responses of others. Two questions were asked which provide some information as to the nature of teacher behaviors toward students and how those behaviors are perceived by the child. One of the questions asked students was, "If the teacher ever did anything to make them (the student) feel important?" A wide variety of responses were given to this question. Several students indicated that when the teacher gave them good grades or "bragged on them," they felt important. Other students stated that when the teacher let them do important things, like take messages to the office or to other teachers, grade papers, or put away equipment,
they felt important. But for some students seemingly very trivial and often times unnoticed teacher behaviors were identified as making the pupils feel important. Some of these students identified such teacher behaviors as a slight wink, a smile at them (the student) in the morning, acknowledging the existence of a student by calling his name occasionally, or putting their arms around the student. Most of the behaviors which were reported in response to this question were collapsed into a category called "Positive Reinforcement."

The statements which were made in response to the question, "Does your teacher ever do anything that makes you feel like you are not important? If so what?" were clustered into two categories. Those perceptual statements were categorized in either the category "Denies, Avoids, Ignores," or "Attacks, Belittles, Ridicules." If the student reported that the teacher "Never called on them," "Did not look at them as they talked," or, "Did not look at their papers," those statements were categorized as ignoring behaviors.

Many of the teacher behaviors identified by the students as making them feel unimportant were categorized as "Attacks, Belittles, or Ridicules." When the children reported that the teacher threatened to "Paddle them", "Send a note home to their parents," or "Send them to the office" those behaviors were viewed as attacking statements. Some students reported that they felt particularly unimportant when the teacher said things like, "Ah! You can do better than that," or "Come on now!" or "You didn't study much did you?" Such teacher behaviors were viewed as ridiculing the student. Several of the
students revealed that certain teacher behaviors were very intimidating. The students said that when the teacher "Stared at them," or "Jerked them," they felt very unimportant. Such teacher behaviors were also clustered under the category "Attacks, Belittles, Ridicules."

The students were asked to identify teacher behaviors which served as an indicator of the teacher's sense of humor. The question used to solicit such student perceptions was "What sorts of things does your teacher think are funny? What does she do when something is funny?" The statement made by many of the students was, "She tells jokes and laughs a lot." Other students said that the teacher often "Laughed a lot when she messed something up." Such teacher behaviors were categorized as "Breaks Tension."

There were other teacher behaviors included in the "Breaks Tension" category. These statements came from responses made to other questions in the questionnaire. Many students felt that the class was much more enjoyable when the teacher "Smiled a lot," or "Brought games for them to play." A few of the students stated that they liked school much more when the teacher, "Lets us have a break every once in a while," or, "Lets us do art work."

Several teacher nonverbal behaviors have been discussed in relation to the questions and categories discussed so far. Many other teacher nonverbal behaviors were reported when students responded to the question, "How does your teacher get your attention?" Students identified many teacher behaviors which were used to control classroom activities. The statements of student's perceptions included such
nonverbal behaviors as: "She claps her hands," "She clears her throat," "She snaps her fingers," "She stands in front of the class with her arms folded and waits real quietly," "She looks at us real hard," or, "She gets out the paddle."

Along with these obvious teacher nonverbal behaviors the students also identified several verbal behaviors used by the teacher to get the attention of the students. Many of the verbalizations made by the teacher did have strong nonverbal implications. For example the students not only reported that the teacher asked them to be quiet, they also stated that the teacher yelled at them. When the statements were reported as questionnaire responses the student often placed two or three exclamation marks after a statement like, "She says, 'You kids get quiet!!'" When similar perceptions were related by students during the interview the students were often very dramatic in their description of the teacher behavior. The pupil perceptions of teacher behaviors reported in response to the question, "How does your teacher get your attention?" whether verbal or nonverbal, fell into the category "Managerial Signaling."

There were several teacher behaviors reported by students that have both affective and cognitive importance. These behaviors were reported in response to the question, "What does your teacher do when you give the wrong answer?" and were clustered into a category called "Corrective Feedback." If the teacher behavior had negative overtones it could be viewed as having negative affect. Some examples of more negative corrective teacher behaviors identified by students
were: "The teacher tells me, 'No' real hard;" "The teacher stares at me and just shakes her head;" and "The teacher tells me I am wrong all the time." However, some students noted that the teacher could correct them in a non-threatening manner, and as such those teacher behaviors were more in the realm of substantive information. For example some students said, "She just says, 'Wrong', and goes on to someone else," or "She says, 'That's not quite right' and goes on." Several students related some subtle nonverbal cues given by the teacher which told them they were wrong. One student said, "Sometimes when I give the wrong answer the teacher sort of wrinkles her lip and turns down her eyes. Then I know I am wrong. But that's O.K." Such teacher behaviors were much less threatening.

Not all the teacher behaviors perceived and reported by the students have affective implications. There were many questions asked of the students which afforded them opportunity to relate their perceptions of the teacher's cognitive teaching strategies. Cognitive teaching strategies means those behaviors which the teacher employs in the classroom presentation of subject matter. The responses given by students supports the notion that students can observe and differentiate different instructional skills employed by the teacher.

Perhaps the question which provided the majority of the reports of teacher cognitive teaching strategies was: "Do you ever get the feeling that your teacher is really trying hard to teach? What does she do when she is trying to teach?" Most of the students responded to this question by saying, "She explains things to us." There were
some students who said that the teacher, "Tells us over and over how to do stuff." A few students said, "If we don't understand something she tells us over until we do." Responses of this nature were grouped into a category called "Explains or Clarifies."

There were other responses to the aforementioned question which fell into other groupings. Several students indicated that the teacher, "Asks us a lot of questions about the stuff she is teaching." Most of the students offered a very similar response signifying that their teacher does ask questions. There were sufficient numbers of that same statement to merit a category called "Asks Questions."

Aside from teachers asking questions, the students also reported that their teachers also answered questions. A number of students responded with statements like, "The teacher answers questions I have about what she is teaching." Since this response, or one very similar, did occur throughout the responses to the questionnaires and/or interviews a category called "Answers Questions" was established.

The students also perceived and reported many cognitive teacher behaviors which clustered into a category called "Models, Displays, Demonstrates." Students reported that teachers often, "Bring maps and stuff to class," "Do experiments in class," or, "Write stuff on the board that we should know." Some of the students reported that the teacher would put a model of a piece of work out for all to see.

The teacher behaviors perceived and reported by students and
summarized in the preceding paragraphs supply ample evidence that students do, in fact, perceive discrete teacher behaviors and can verbalize those perceptions. The perceptions reported by the students serve as evidence that a questionnaire could be developed which might be used to collect pupil perceptions.

The questions of reliability and validity of measurements obtained by using certain instruments are always at issue. Such measures reflect some aspects of the functional utility of the instruments. The notions of reliability and validity of the questionnaire are explained in detail in Appendix I. The reliability coefficients reported were very conservative estimates of the reliability of measurements obtained by using the questionnaire.

The issue of the validity of measures obtained by using the questionnaire was more critical to this study than was the reliability question. The real question at issue in the early stages of this study was: Can an instrument be developed which will serve to collect perceptions students have of their teacher's classroom behavior, and will those perceptions be valid statements of teacher behavior? Another question also of great importance to this study was: Will the perceptions reported by the students logically represent teacher behaviors within a given context? Since there appeared to be no reason for the student to report false information it was assumed that there was a degree of validity (truthfulness) in the student's reports of their perceptions. The second dimension of the validity issue (the logical nature of the student perceptions) can be ascertained
by looking at the nature of the student perceptions reported. There was support for this dimension of validity in that as each response was read and analyzed it appeared to be a logical and possible teacher behavior within a given context. Almost all behaviors reported were, in fact, logical and possible (valid). The student perceptual statements fulfill, in part, the definition Schwab (1960) has for validity. Schwab defines validity as "...the extent to which the terms of a research program approximate to the presumptive richness and complexity of the subject matter [p. 7]." By recalling some of the examples presented earlier in this section one can generalize that the statements do approximate the presumptive richness of teacher behavior. 6

The information presented thus far concerning the clustering of pupil perceptions into categories is presented in the following with definitions and examples of teacher behaviors. The categories will be numbered in the order that the system was taught to a group of observers, and the specific category names will be underlined.

1. **Explains or Clarifies**: Giving facts or opinions about content or procedure; expressing his (the teacher's) own ideas; asking rhetorical questions. Rendering a previous statement more intelligible either by (a) restating or rephrasing, or (b) adding informative details. Examples of student statements clustered into this category are: "She explains things to us;" "She lectures;" or, "She tells us how to do stuff."

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6 Other examples of pupil statements of teacher behavior can be found in Appendices B, C, and E. By studying those behaviors closely one can see that the statements given by students were quite valid if one accepts the definition provided above.
2. **Asks Questions**: Asking questions about content or procedure with the intent that a student answer such questions. The questions may also ask for student opinion regarding content or procedure. Examples of student statements falling into this category are: "After she explains something she asks us a lot of questions about it;" or "She asks us questions about the subject."

3. **Answers Questions**: Includes direct answers to student questions. Such answers may give information or opinion but must be responses which answer or are directed toward answering student questions. Examples of student statements falling into this category are: "When we ask her a question she answers us;" or "She answers all of our questions."

4. **Seeks Clarification**: Behaviors used by the teacher to seek additional information which serves to clarify previous student talk. Some examples of student statements falling into this category are: "She has a puzzled look on her face;" "She has me to repeat it in different words;" or "She says, 'Say that again.'"

5. **Corrective Feedback**: Includes behaviors that are designed to indicate the incorrectness or inappropriateness of student behavior. Examples of statements clustering in this category are: "She says, 'Wrong;';" "She says, 'That's not exactly right;';" or "She says, 'You're on the right track -- but.'"

6. **Models-Displays-Demonstrates**: Behavior which points up student work as being considered as a standard of excellence to be imitated. Such teacher behaviors as writing on the board, providing extra reference materials, doing experiments, or demonstrations, etc., are also included in this category. Examples of such teacher behaviors are: "She writes on the board;" "She brings pictures and stuff to class;" or "She demonstrates things in science."
7. **Managerial Signals:** Giving direction, commands, or orders to which the student is expected to comply. These behaviors may be either verbal or nonverbal. The behaviors may be intended to change student behavior from a non-acceptable to acceptable pattern. Examples of teacher behaviors identified and reported by students are: "She beats on her desk with a ruler;" "She stands in front of the room and lets out a deep breath;" or "She stares at us."

8. **Active Listening-Assisting-Focusing Attention:** A behavior that implies a willingness to listen with patience and interest to a pupil. By paying attention to the pupil, the teacher exhibits an interest in the pupil and implicitly manifests approval, satisfaction, or encouragement. An act that meets a pupil's request; a nurturant act. Examples of student statements of teacher behavior falling into this category are: "She nods her head when I am talking;" "She looks straight in my eyes when I say something;" or "She asks me other questions about what I am doing."

9. **Positive Reinforcement-Rewards:** A supportive behavior which exceeds a simple designation of correctness and reward students for their performance. Includes behaviors with a positive value orientation directed at student behavior. Behaviors which praise or reward current behavior as well as previous or predicted future behavior are included in this category. Examples of student statements clustering into this category are: "She sends me on important errands;" "She tells me I am the best in the class;" or "She gives me good grades on my papers."

10. **Breaks Tension-Humorizes:** Behaviors which tend to open up and/or eliminate the tension or anxiety of the situation. Jokes that release tension not at the expense of others. Laughing and joking that tend to ease tension. Examples of behaviors falling in this category are: "She tells jokes and laughs a lot;" "She smiles a lot;" or, "She laughs at herself when she messes up."
11. Denies-Avoids-Ignores: A behavior that implies an unwillingness or inability to engage attentively in the communicative process, thus, indicating disinterest or impatience with the pupil. A behavior that openly ignores a pupil, or that is insensitive to a pupil's feeling; a tangential response. Some examples of student statements grouped into this category are: "She looks away when I talk to her;" "She never tells me my work is good;" or "She sends me away when I ask her something."

12. Attack-Belittles-Ridicules: A harsh, punitive, blame-laying or guilt inducing behavior. A behavior implying strong disapproval of a pupil's behavior or pupil interaction. An expression that indicates strong negative overtones, disparagement, or strong dissatisfaction. An expression which functions in making someone or something the object of contemptuous laughter by joking, mocking, or caricaturing. Examples of student statements of teacher behaviors being clustered into this category are: "She gives me a 500 word essay;" "She makes me stay after school;" or "She yells at me." 7

Aside from the information presented thus far on the nature of student perceptions and the clustering of those statements into categories, some additional information was also gleaned from the student perceptual statements. The statements made either in response to the questionnaire or during the interviews were further analyzed and all those statements which could be clustered into one of the twelve categories mentioned above were assigned to a category. A tally of the number of statements falling into each category was kept for each class. The tallies for each category in each class were converted into percentages. The same was done collapsing all the

7Many other examples of the different pupil statements and the way they were clustered can be found in Appendix H.
categories over all 12 classes. Table 2 is a presentation of the results of this tallying and conversion to percentages.

An examination of the data in Table 2 indicates several interesting points. There appears to be little difference in the number of student perceptual statements sorted into any one category across all 12 classrooms studied. For example, by examining the questionnaire percentages for Category 1 it can be noted that except for two instances the percentages reported are within the five to seven percent range. The two and three percent were in classrooms B3 and C2 respectively. Very similar patterns occur in each of the 12 categories.

Another finding which becomes evident through an examination of Table 2 is the heavy loading of student statements into the more affective categories. By examining the percentages of categorized student statements found in the row labeled Q + I this affective clustering becomes evident. Categories 8, 9, 10, 11, and 12 are affective in nature and account for 72% of the student statements categorized. Categories 1 through 7 are more cognitive in nature. Those seven categories account for only 28% of all student statements categorized.

Sortings By The Panel Of Judges -- Construct Validity

The statements offered by students represent their perceptions of teacher behaviors which have a significant effect on them (the students). In the present study it was assumed that the teacher
<table>
<thead>
<tr>
<th>Classrooms</th>
<th>Categories</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>613</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>1105</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>1105</td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>303</td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>106</td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>303</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>C5</td>
<td>303</td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>130</td>
<td></td>
</tr>
</tbody>
</table>

Table 2

TALLIES OF STUDENT PERCEPTUAL STATEMENTS INTO THE RESPECTIVE CATEGORIES

<table>
<thead>
<tr>
<th>Classrooms</th>
<th>Categories</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>613</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>195</td>
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<tr>
<td>B1</td>
<td>1105</td>
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<tr>
<td>B2</td>
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<tr>
<td>B3</td>
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<tr>
<td>C1</td>
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<td>C2</td>
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<td>C4</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>C5</td>
<td>303</td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>130</td>
<td></td>
</tr>
</tbody>
</table>

* The A indicates the school from which the data was gathered, and the numeral indicates the classroom from which the data was gathered.
behaviors perceived by students would be valid constructs for an observational system since the students were in the best position to identify significant teacher behaviors. The qualitative data presented and analyzed above provided some support for the construct validity of the observational instrument developed in the present study.

In order to provide a clearer understanding of the validity of the constructs (category names) samples of the students' statements were selected for further analysis by a panel of judges. The judges were asked to sort the perceptual statements into one of the twelve categories provided them. The results of the judges' sortings can be found in Table 3.

The data presented in Table 3 represent the percent of agreement of the sorting of the perceptual statements by this researcher and each judge. The data support the idea that a relatively high percent of agreement exist between the sortings of pupil perceptions done by this researcher and the sortings done by the judges. The grand mean of the percent of agreement is 82.92%. It can be noted that with but one exception (Judge D), the range is very narrow -- 80.9% to 87.8%. An explanation for the sorting procedure used by the judges can be found in Chapter III.

By comparing the number of tallies each judge had in each category to the number of tallies this researcher (Whitfield) assigned to each category, some additional information can be gleened from Table 3. The number of tallies in the first six categories (the substantive categories) is in relatively high agreement with this
### Table 3

**Judges' Sortings of Pupils' Statements of Their Teachers' Classroom Behaviors into Predetermined Categories**

<table>
<thead>
<tr>
<th>Judge</th>
<th>Categories</th>
<th>Total</th>
<th>Per cent of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>11 2 2 11 6 12 27 12 22 9 13 39</td>
<td>166</td>
<td>87.8</td>
</tr>
<tr>
<td>B</td>
<td>10 2 2 11 6 4 25 11 12 10 15 42</td>
<td>155</td>
<td>82.1</td>
</tr>
<tr>
<td>C</td>
<td>10 2 2 11 5 10 25 13 27 5 13 40</td>
<td>163</td>
<td>86.2</td>
</tr>
<tr>
<td>D</td>
<td>9 2 2 12 2 11 27 5 26 3 15 18</td>
<td>132</td>
<td>69.8</td>
</tr>
<tr>
<td>E</td>
<td>9 2 2 11 6 10 22 12 24 4 14 39</td>
<td>155</td>
<td>82.1</td>
</tr>
<tr>
<td>F</td>
<td>11 2 2 12 5 11 19 14 24 10 14 41</td>
<td>165</td>
<td>87.3</td>
</tr>
<tr>
<td>G</td>
<td>9 2 2 10 6 10 20 10 25 10 15 34</td>
<td>153</td>
<td>80.9</td>
</tr>
<tr>
<td>H</td>
<td>11 2 2 13 6 12 23 14 24 6 11 41</td>
<td>165</td>
<td>87.3</td>
</tr>
<tr>
<td>Whitfield</td>
<td>11 2 2 17 6 12 27 14 27 10 15</td>
<td>189</td>
<td></td>
</tr>
</tbody>
</table>

Mean Interjudge Agreement: 82.92
researcher's tallies. The differences begin to appear in the more affective categories (categories 7-12). Similar difficulties have also arisen with other systems (Broadwater, 1971).

Although the data in Table 3 report some relatively high percentages of agreement, caution must be taken in drawing conclusions based on sorting of statements into categories. There are some entry points for error. Some possible sources for error variance are: (1) mood of the judge at the time of sorting; (2) the judge's preconceived notions of teacher behavior associated with certain pupil statements of teacher behavior; (3) the judges may have had insufficient information concerning the context within which the student statement was made; or, (4) the judges may have cued on one word for sorting.

The first two sources of error variance mentioned above affect anyone sorting statements such as those in this study. As such, the variance should theoretically be homogeneous. However, the latter two sources can cause discrepancies in homogeneity of variance.

In discussing the notion of insufficient contextual information as a source of error variance one point becomes evident as this issue relates to the present study. The statements provided the judges were lifted out of context and, as such, error variance could have been magnified. This fact alone could account for much of the variance in the sortings. However, since all the judges were provided the same information and the same guidelines it can be assumed that the error variance would be evenly distributed. Thus, the percents
of agreement reported in Table 3 would appear substantial.

Perhaps one of the most serious threats to support for the validity of constructs through sorting of student statements can be found in a judge's cueing on one or more words in the statement. This is a source of error variance over which one has no control. This source of variance was mentioned by one of the judges after he had completed the sorting. However, the validity of the sorting process cannot be rejected based on one such source of variance. It is quite possible that others could have cued on other words in the statements. Had the agreements been much lower there would have been cause to be concerned about this source of variance. The high agreement tend to negate cueing on one word as causing a major interference with the construct validity issue.

The data in Table 3 provide strong support for the construct validity issue of the observational system developed in this study. The high percent agreements tend to over-rule most serious threats to the validity question. The data reported in Table 3 also provide some answers to the question "To what degree will a panel of judges agree on the assignment of pupil perceptions to prescribed categories of teacher behavior?"

**Codings By Observers -- Inter-Rater Reliability**

The data reported previously in this chapter give some indication of the construct validity of the categories of the observational system developed in the present study. The reliability
issue was dealt with by having four research associates and this researcher observe and code video tapes using the system developed in this study. However, one very small change was made in the system reported earlier in this chapter. A thirteenth category was added to the system prior to any coding. Category 13, a silence category, was used when silent, non-functional behavior was taking place in the classroom. Six ten minute episodes were coded by each observer. Percentages of teacher behaviors assigned to each category across all episodes by each observer appear in Table 4.

An analysis of the data presented in Table 4 reveals some interesting information. It can be noted that when observers observe and code teaching behaviors there exist a distinct clustering of teacher behaviors into certain categories. The clustering of teacher behaviors coded by the observers tend to fall into seven categories: (1.) Explains or Clarifies; (2.) Asks Questions; (4.) Seeks Clarification; (6.) Models-Displays-Demonstrates; (7.) Managerial Signal; (8.) Active Listening-Assisting-Focusing Attention; and (9.) Positive Reinforcement. However, when one recalls the teacher behavior identified by students and the results of those reports as presented in Table 2 some interesting discrepancies can be noticed. The students reported more of the behaviors in Category 11 (Denies-Avoids-Ignores) and Category 12 (Attacks-Belittles-Ridicules).

Using the percentages for each observer, the research associates' codings were then compared to this researcher's by employing the Cohen inter-rater reliability formula (Cohen, 1960). The inter-rater reliability coefficients can be found in Table 5.
### Table 4

#### Percentages of Teacher Behaviors Coded into Predetermined Categories by Observers Over Six Video Taped Teaching Episodes

<table>
<thead>
<tr>
<th>Coding Episodes</th>
<th>Observers</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td></td>
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<tr>
<td>A</td>
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<td>B</td>
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<td>47</td>
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<td>C</td>
<td></td>
<td>53</td>
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<td>D</td>
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<td>C</td>
<td></td>
<td>47</td>
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<tr>
<td>D</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>
The data reported in Table 5 provide support for the notion that an observational system, developed by using student perceptions of teacher behaviors, can be taught to a group of observers. The data provide an indication that observers can be trained to use such an observational system with a relatively high degree of inter-rater agreement on successive codings of teaching episodes.

The inter-rater reliability coefficients shown in Table 5 would not be sufficiently high for research using the system. The purpose of the study was not to determine if the system could be taught to a group of observers for use in research purposes. Neither was the study an attempt to test a technique for training observers to use the observational system. The training was minimal (three-hours including coding for inter-rater-reliability computation). With such limited training the coefficients reported in Table 5 were sufficient for the purpose of this study. That purpose, as was stated earlier in this chapter, was to determine if an observational system which was developed from pupil perceptions of their teacher's behavior could be taught to observers to such an extent that they could observe and code ten minute episodes of video tapes of a teacher's classroom behavior.

By analyzing the data reported in Table 5 differences can be noted in two areas. Perhaps the most noticeable discrepancy is that observer A is consistently in higher agreement with this researcher than any of the other observers.

The second major difference that can be gleaned from Table 5
### TABLE 5

Cohen-Inter-Rater-Reliability Coefficients of Each Observer When Compared to This Researcher On Each Incident Observed

<table>
<thead>
<tr>
<th>Observer</th>
<th>Coded Episodes</th>
<th>Mean Inter-Rater-Reliability Coefficient For Each Observer Over All Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A</td>
<td>.7857</td>
<td>.6571</td>
</tr>
<tr>
<td>B</td>
<td>.2658</td>
<td>.6250</td>
</tr>
<tr>
<td>C</td>
<td>.1379</td>
<td>.5211</td>
</tr>
<tr>
<td>D</td>
<td>.4883</td>
<td>.5354</td>
</tr>
</tbody>
</table>

Mean Inter-Rater-Reliability Coefficients For All Observers Over Any One Incident

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Inter-Rater-Reliability Coefficients For All Observers Over Any One Incident</td>
<td>.4194</td>
<td>.5856</td>
</tr>
</tbody>
</table>
is that the mean coefficient in episode number 1 is significantly lower than the mean coefficients for any of the other episodes. One of the most likely causes for such a difference in episode coefficients lies in the fact that from one coding to the next the observers become more familiar with the conventions of the category system. The difference in episode number 1 and number 2 can be accounted for almost entirely on this basis. Following the coding of the first episode there was a lengthy discussion of certain teaching behaviors and conventions to be used in the remaining tapes. Such a discussion also followed each subsequent episode coding. A second, and equally important explanation for the difference in coefficients for subsequent episodes is that different teachers teach differently. As each new episode was observed, different teachers and teaching styles were coded. Not all of the episodes were of equal difficulty to code. The data indicate that possibly episodes number 3 (.72) and number 6 (.71) were easier to code than episode number 5 (.57).

Not only are different teaching episodes more difficult to code than others, but some observers can identify with and code certain teaching styles more easily than others. This fact can account for differences between an individual's codings on any one episode and the group's coding of that same episode. For example in episode number 6, observer A had a coefficient of .70 and seemed to code that episode less effectively than previous episodes, while the other observers seemed to improve greatly on the same episode.
Summary of Findings

This chapter has been a presentation and analysis of the data collected in the study. The data reported and analyzed were both qualitative and quantitative. The following will be sentence summaries of the findings indicated by these data.

1. An instrument and procedures can be developed which can be used to collect student's perceptions of their teacher's classroom behaviors.

2. Both an interview procedure and a questionnaire technique can be used to collect pupil perceptions of their teacher's classroom behaviors.

3. Students can verbalize (both written and oral) the perceptions they have of their teacher's classroom behavior.

4. There appears to be very little difference in the kinds of information reported by students whether that information is reported on a questionnaire or in an interview. The major difference in the two is that during the interview a child will report more information than he will on a questionnaire.

5. Students can identify and report abstract and subtle teacher classroom behaviors.

6. Students identify and place significant value on nonverbal, as well as, verbal teacher classroom behaviors.

7. Statements of pupils' perceptions of their teacher's classroom behavior can be clustered into a descriptive category observational system. Such a category system reflects construct validity and reliability.

8. A panel of judges can reach a high degree of agreement on their sortings of pupils' perceptions of teacher classroom behavior into predetermined categories.
9. Observers can be trained to reliably code teaching episodes using an observational procedure that has been developed from student perceptions of teacher classroom behavior.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The need for this study evolved from a thorough review of literature on observational systems. That review of literature revealed the fact that no observational system had ever been developed based entirely on student perceptions of their teachers. It was felt that since students had the most constant contact with the teacher, the students' perceptions should be a valid source of information concerning teacher behavior. There were four basic research questions stated at the outset of this study. They were:

1. Can a valid and reliable procedure be developed to collect pupils' perceptions of teacher's classroom behavior?
2. Can teacher behaviors identified by students be collapsed into categories that can be used in the analysis of teacher-classroom-behavior?
3. To what degree will a panel of judges agree on the assignment of pupils' perceptions to prescribed categories of teacher behavior?
4. Can an observational system which was developed from pupils' perceptions of their teacher's behavior be taught to observers to such an extent that they can observe and code ten minute episodes of video tapes of teacher's classroom behaviors?
A questionnaire was developed as a means of collecting pupil perceptions. The questions contained in the questionnaire were based on constructs which evolved from research on characteristics of good teachers. The questionnaire was pilot tested on a population similar to the one used in this study. The purpose of the pilot testing was to obtain measures of validity and reliability of the questionnaire for collecting student perceptual statements. The pilot testing also served as a period during which this researcher became better acquainted with techniques used in interviewing children.

The data were collected in twelve sixth-grade classrooms randomly selected from a frame of 30 such classrooms. The students were first administered the questionnaire. Then, five students were randomly selected from each class and administered the same questionnaire during an interview.

The responses to the questionnaire, whether as questionnaire or during an interview, were analyzed and collapsed into categories. Twelve categories resulted from this clustering procedure. The statements of pupil perceptions served as some of the conventions for the category system thus developed.

One-hundred-fifty-nine of the statements of pupil perceptions were selected for further analysis. This analysis was conducted by a panel of eight judges who are considered experts in the field of observational research. The judges were asked to sort the perceptual statements into twelve predetermined categories. The results of that sorting procedure were statistically analyzed to ascertain the degree
of agreement between the judge's sortings of the perceptual statements and the sorting of the same statements by this researcher.

The final procedure employed in this study was the training of observers in the use of the observational system developed in this study. Four observers were trained in the conventions of the category system. Following the training the observers and this researcher observed six video-taped teaching episodes and coded those same episodes using the observational system developed in this study. The data were statistically analyzed in order to obtain inter-rater-reliability coefficients of the observers' codings.

Summary of the Findings

This study has been an investigation of the use of student perceptions as a source of data in the development of an observational system. The data reported and analyzed were both qualitative and quantitative. The following findings were established for this study.

1. An instrument and procedures can be developed which can be used to collect student's perceptions of their teacher's classroom behaviors.

2. Both an interview procedure and a questionnaire technique can be used to collect pupil perceptions of their teacher's classroom behaviors.

3. Students can verbalize (both written and oral) the perceptions they have of their teacher's classroom behavior.
4. There appears to be very little difference in the kinds of information reported by students whether that information is reported on a questionnaire or in an interview. The major difference in the two is that during the interview a child will report more information than he will on a questionnaire.

5. Students can identify and report abstract and subtle teacher classroom behaviors.

6. Students identify and place significant value on nonverbal, as well as, verbal teacher classroom behaviors.

7. Statements of pupils' perceptions of their teacher's classroom behavior can be clustered into a descriptive category observational system. Such a category system reflects construct validity and reliability.

8. A panel of judges can reach a high degree of agreement on their sorting of pupils' perceptions of teacher classroom behavior into predetermined categories.

9. Observers can be trained to reliably code teaching episodes using an observational procedure that has been developed from student perceptions of teacher classroom behavior.

Conclusions

This study has been an investigation of the nature of student perceptions of their teachers, and the use of those perceptions in the development of an observational system for analyzing teacher-classroom-behavior. The findings of this research venture enable one to draw several conclusions.

Perhaps one of the most obvious conclusions that can be drawn from this study is that students do perceive very subtle
teacher behaviors, and that students can report their perceptions with a richness of language. Students often share their perceptions with their peers, and sometimes very subtly with the teacher. It is just that adults receive those pupil perceptual reports through a highly sophisticated adult screen. It is when the adult is able to partially remove the screen and look at what children say for the value of their message that one can recognize the perceptiveness of the young. The quality of student statements of their perceptions of their teachers was commented on in Chapter IV. There it was noted, and supportive examples given, that students could identify teaching behaviors with a high degree of sophistication. It was also reported in Chapter IV that children could report these perceptions with a rich language of their own.

A second major conclusion to be drawn as a result of this study is that teacher-nonverbal-behaviors are identified by students as having a significant effect on the classroom affective environment. Early work in observational systems operated on an assumption that the teacher's verbal communication was representative of all significant communication occurring in classrooms (Withall, 1945; Flanders, 1965).

Galloway's (1962) study resulted in the construction of an observational system for analyzing teacher-nonverbal-behaviors. Of primary concern to Galloway were facial expressions, actions, and vocal language which could be observed in inferring teacher enthusiastic support, helping, receptivity, inattentiveness, unresponsive, and disapproval. However, Galloway had only observed
teachers and theorized that certain teacher nonverbal behaviors significantly affected student attitudes and subsequent behavior. The perceptual statements offered by students in this study provide examples as evidence that the nonverbal behaviors used by teachers provide communicative messages in the affective classroom environment. Such reports of pupil perceptions shed new light on the assumptions made by Galloway and other early writers in the study of classroom communication.

A third major conclusion resulting from this study is that a valid and reliable category observational system can be developed by using pupil perceptions of their teachers as a source of data for category construction. Although not all of the students' statements of their perceptions of their teachers were usable, a great majority were. Those perceptual statements used clustered well into categories of an observational system. There were some statements that appeared to fall into more than one category, but for the most part, the categories were distinct and separate. The judges' sortings supply some support for the distinctive nature of the categories, in that judges' sorted student statements into predetermined categories with a relatively high degree of agreement with this researcher's sortings.

A final major conclusion resulting from this study is that the system developed herein can be taught to observers to the extent that they can observe teaching episodes and code those episodes using the system. Observers were taught the system and did code teaching
episodes with a relatively high percentage of agreement with the codings done by this investigator. Such evidence is supportive of the statement that observers can be taught the conventions of the category system, and that being so taught, the observers can make coded distinctions in teacher behaviors. Though the inter-rater-reliability coefficients reported in Chapter IV would not be high enough for observers to use the system for research purposes, they are sufficiently high to support the above statements.

**Speculations and Implications**

The foregoing conclusions represent a basis for arriving at certain speculations and implications which can be supported by the data in the study. The following will be a presentation of some of those speculations and implications.

One of the implications of the study is that the language used by children to report their perceptions of people in their environment is quite different from the language used by adults for the same purpose. It appeared that the vocabulary used by children was minimal and quite straight to the point. Whereas, adults often talk in more general terms with much more encompassing terminology. Children also tend to use very brief sentences or short phrases as descriptors while adults tend to be more elaborate in their descriptions.

The data in Tables 2 and 4 provide some justification for some very interesting speculations. When students were asked to report their perceptions of their teachers, and those perceptual statements
sorted into categories, certain categories were more loaded than others. For example, students tended to make perceptual statements which clustered very heavily in the more affective categories (i.e. 7, 8, 9, 10, 11, and 12). Of particular interest within the affective category loading is that students tended to identify many teacher behaviors which were either in Category 11 (Denies-Avoids-Ignores) or Category 12 (Attacks-Belittles-Ridicules). Students identified very few teacher behaviors which were more of a cognitive nature. There was a very low clustering of teacher behaviors into Category 1 (Explains or Clarifies), Category 2 (Asks Questions), or Category 3 (Answers Questions).

When one compares the results of sorting pupil perceptions of their teachers into categories with adult codings of teacher behaviors using the same system, some very different results can be noted. The data in Table 4 suggest that teachers use few behaviors identified by Categories 11 and 12; and that teachers spend a considerable amount of time explaining or clarifying and asking questions (Categories 1 and 2 respectively).

Other observational research on teacher behavior has produced findings very similar to those discussed in the preceding paragraph. Flanders' (1965) observers coded teaching episodes using a form of Flanders' System of Interaction Analysis. These observers' codings loaded into categories of questioning, giving information or opinion, and giving directions. The percentages of teacher behavior being coded as criticizing or justifying authority were very low.
There are many possible explanations for the differences in student statements being sorted into categories and observers' codings into the different categories. Students could be weighing the affective teacher behaviors much more than do adults. Teacher behavior that appears to be trivial in the eyes of adult observers might be viewed as extremely significant in the mind of a child. Adults could be looking more at the cognitive teacher behaviors. Cognitive behaviors require less information and are low inference in nature. Students, having had continuous contact with the teacher, have a broader information base for weighing teacher behaviors than does the observer who has limited contact with the teacher. Students reside with the teacher daily and are the targets of teacher behavior. Observers are outsiders who enter the room for a short time to code teaching behaviors.

Another speculation offered as an explanation of the difference that exist in sorted student perceptual statements and observers' codings is that teachers are performing for the observers. Teachers can perform for a short time while an observer is in the classroom. However, it is difficult for a teacher to perform for any extended time period. The students, having extended contact with the teacher, see the teacher as he is rather than as he might wish to be seen.

There are several implications growing out of the preceding speculations. If one is concerned with teacher behaviors and their subsequent effects upon student attitudes, perhaps the best method of studying those teacher behaviors is to ask the student to identify
significant teacher behaviors. It would appear that observational system research would not function as well as would the use of questionnaires and interviews in identifying such significant teacher behaviors.

If an observational system is to be used to study teacher behavior perhaps the data gathering should be done without the teacher knowing when he is being observed. If conditions are such that the teacher knows when he is being observed, then it is suggested that the observer make many observations over a long time period. By extending the data gathering period, the observer increases the possibility of sampling the teachers "true" teaching behavior.

Another implication resulting from the present study is that the nonverbal behaviors used by teachers play a very significant role in the social-emotional climate in the classroom. Although verbalization is necessary for most communication, the fidelity of communication acts also include nonverbal messages. Through verbalization one can communicate thoughts, ideas, and other notions, but the congruity of the message can be affected by hidden agenda which can surface through nonverbal expressions. Students reported the verbal statements of teachers, but also reported, and often times more emphatically, the underlying emotions of teachers as revealed by nonverbal expressions. The teacher behaviors thus perceived and reported by the students act as a basis for the establishment of the social-emotional climate in the classroom.

A final implication of this study is the extreme difficulty of
establishing an observational procedure which reflects student perceptions of their teachers. Even though the category system developed in this study evolved from students' perceptions of their teachers, the categories are not fully representative of the richness of student perceptions. Perhaps a combination of a sign system and a category system would be more representative, but even such a combination would preclude some of the perceptual richness desired. Training adults in the conventions of category and/or sign systems does not give adults the same feelings and experiences the child encounters as he makes certain perceptual statements.

Recommendations for Future Research

One of the central aims of an exploratory study is the generation of hypotheses or research questions that serve as focal points for future studies in the field. Such was the case with the present study. The following paragraphs will serve as recommendations for future studies.

With this study, as with other studies which focus on the development of observational systems, a question always at issue is further validation of the categories. The present study provided some support for the construct validity issue in that it evolved from a valid source -- the students. However, the validity that is still needed is the effect these teacher behaviors have on student learning. Several studies need to be done which focus on student learning or student attitudes toward school or teachers as dependent variables.
and the categorized teacher behaviors as the independent variables. Such studies would provide a basis for either supporting or rejecting certain teacher behaviors.

As a means of improving the construct validity of an observational system developed from student perceptions of their teachers a more rigorous factor analysis procedure is recommended. Once the students' perceptual statements have been collected it is suggested that rather than provide judges with predetermined categories a researcher might request that the judges cluster analyze the statements. After having sorted the statements the judges would then be requested to assign category names to the different groupings of perceptual statements. These category names and clustering of student perceptual statements would then be subjected to a detailed factor analysis procedure. Such a procedure might lead to some well defined categories with a much higher construct validity.

Another study that is recommended as a follow-up to the present study is the identification of certain teacher behaviors which most strongly affect student behavior and/or attitude. For example, students identified many behaviors used by the teacher to get the attention of the students. The students identified teacher behaviors ranging from a loud, "Shut up!" to a long, hard stare as a means of getting the students to focus on the teacher. It would be valuable for teachers to know which of their behaviors were most likely to get the students' attention. Teachers would also value the findings of a study which provided some direction as to which teacher behaviors
to use to bring about certain desired student behaviors.

If one were interested in which teacher behaviors were most likely to create in students a positive attitude toward learning and school, a study using student perceptual statements might also be conducted. Students have identified teacher behaviors ranging from a wink or smile to the teacher's giving good grades as being reasons for their (students) liking school. If a study were conducted which resulted in providing teachers with an indication of which behaviors would most likely result in students developing positive attitudes toward school, such findings would be extremely valuable. Similar studies could be conducted to ascertain which teacher behaviors make students feel more important or more trustworthy.

The findings of this study revealed that students do, in fact, pay considerable attention to teacher nonverbal behaviors. Perhaps a study needs to be conducted which focuses more closely on the nonverbal behaviors observed by students. Some writers have written that when given a choice as to whether to believe the verbal or nonverbal, one will usually believe the nonverbal. For example, students often believe a teacher doesn't like them even though the teacher says she does. The students identified such teacher behaviors as not calling on them (the students) or not looking at them (the students) as evidence that the teacher did not like them. A study needs to be done which focuses on this congruity and incongruity of the verbal and nonverbal messages.

As with any observational system a question often posed is how
best to train observers to use an observational system. Perhaps several studies can be conducted on methods used in the training of observers. Also associated with training techniques is the issue of the extent to which observers can be trained to use the system developed in this study. In such a study the major emphasis would be the maximum inter-rater-agreement that observers can be taught to achieve.

Still another study that is suggested by this study is one which focuses on the degree that students and their teachers agree on teacher's classroom behaviors. Some of the data in the present study tend to indicate that there is a considerable discrepancy between observers and students' perceptions of teachers behaviors. A study such as the one being suggested here would be designed to test whether teachers and students perceived the teacher differently; and whether, teachers performed the same when being observed as they did in their daily routine.

A final recommendation offered here would be a study which focuses on students' perceptions of teachers across many grade levels. The present study focused only on one grade level and one organizational pattern. A study is needed which focuses on similarities and differences in teacher behaviors across several grade levels and organizational patterns.
The following is a presentation of some guides for writing a questionnaire. The information is excerpts from the work of Arthur Komhauser (1959, p. 423-463). This set of guidelines was found to be one of the most helpful aids to this researcher in constructing the questionnaire-interview-schedule.

GUIDE FOR USE IN WRITING QUESTIONNAIRES

I. Decisions Regarding Question Content (Apart From Wording)

A. Is This Question Necessary? Just How Will It Be Useful?

1. Does the subject matter require a separate question or can it be integrated with other questions?

2. Is the point already sufficiently covered by other questions?

3. Is the matter covered unnecessarily detailed and specific for the purposes of the study?

B. Are Several Questions Needed On The Subject Matter Of This Question?

1. Does the question try to cover too much ground?

2. Is there need for a "set" of questions on the issue? (No magical wording of a single question can cover a complex problem.)

3. Should the question be sub-divided?

   a. Is it too general?

   b. Is more detail needed?

   c. Does it try to cover two points in one?

4. Does the question adequately cover the ground intended?

   a. Do other aspects of the point need additional inquiries?

   b. Does the question bring out decisive features of the matter?
5. Is additional related material needed to interpret the answers?
   a. Are special personal data about respondents needed to throw light on their answers to this question?
   b. Should information be obtained about their attitudes associated with this question?
   c. Are parallel questions needed to provide comparisons with responses to this question?

6. In opinion questions, is further information needed on the respondent's intensity of conviction and degree of feeling?
   a. Are additional questions required to determine how strongly his views are held?
   b. Should further questions be asked to determine how aroused he is about the matter?

7. Is further information needed on how important the respondent considers the condition or issue asked about?
   a. How much difference does it make to him?
   b. What significance does he attach to the matter?

C. Do Respondents Have The Information Necessary To Answer The Question?

1. Is it a matter they can report on adequately?

2. Is proper provision made for differences in respondents' knowledge and experience?

3. Does the question call for answers which the respondent either cannot give at all or cannot give reliably?
   a. Is the point within the respondent's experience?
   b. Is it too remote or nonvivid or difficult a memory?
   c. Is it unanalyzed or unverbalized experience?
   d. Is it subject to serious errors of observation and/or recall?
e. Does the question ask for opinions on matters so unfamiliar to the respondent that the opinion does not mean what it seems to?

f. If the question attempts to supply the needed background information, does it give an adequate and unprejudiced statement?

g. Can the information be satisfactorily supplied or should the question not be asked at all of respondents lacking the information?

4. Is the subject matter of certain questions such that it should be supplied by specific respondents rather than the one first approached?

   a. In questionnaires regarding a family unit or other organization, are the several questions directed to the best respondents?

   b. Is it necessary to go to more than one person to obtain the desired replies?

5. Are alternative questions required on this subject matter to fit it appropriately to different classes of respondents?

   a. Do respondents differ in information and experience on the point, as revealed by preceding questions, in a way that calls for alternative questions adapted to these differences?

   b. Are appropriate parallel sets of questions provided to meet the needs of each group of respondents?

D. Does the Question Need To Be More Concrete, Specific, And Closely Related To The Respondent's Personal Experience?

   1. Is it asked in too general a form?

   2. Can the information be better obtained by referring it more closely to the respondent's own behavior?

   3. Does it ask about specific recent events instead of what the respondent "usually" does?

   4. Does it utilize natural psychological aids to recall, such as having the respondent relive experiences "along the time line," and having him reinstate surrounding memories?
E. Is The Question Content Sufficiently General And Free From Spurious Concreteness And Specificity?

1. Ordinarily, the danger lies in questions that are too general, but on occasion, the reverse is true and the highly specific question is improperly used to tap general attitudes or to ascertain over-all facts.

2. Is the subject matter such that respondents are more able to supply general, over-all information on the point than to give analytical answers on particular parts of the whole?

3. Is the question more specific than necessary for the purpose of the inquiry?

4. Does it lead to inaccurate or misinformed responses?

5. Do the replies express general attitudes and only seem to be as specific as they sound?

F. Is The Question Content Biased Or Loaded In One Direction -- Without Accompanying Questions To Balance The Emphasis?

1. Is the subject matter unfair in any way?

2. Is it likely to obtain answers which will unduly favor one side of the issue?

3. Would the content be accepted as fair by informed persons with opposite views on the point under inquiry?

4. Does the question introduce unwarranted assumptions about the subject matter?

G. Will The Respondents Give The Information That Is Asked For?

1. Is the material too private, of an embarrassing nature, or otherwise likely to lead to resistance, evasion or deception?

   a. What objection might a person have to answering?

   b. Does the question "put him on the spot" or make him feel he is being quizzed?

   c. Can one get at the information in a manner which would not offend, or should it be omitted?
d. Do any special conditions exist at the time and place of the survey to augment suspicion or resistance?

2. Is the question likely to encounter emotional influences and desires which will lead to falsification of answers?
   
a. May the respondents see possible benefits in giving certain exaggerated or gilded replies?
   
b. Is the content such that respondents are likely to assume that certain answers will please the investigators or that others will "hurt the feelings" of the interviewer?

II. Decisions Regarding Question Wording

   A. Can The Question Be Misunderstood? Does It Contain Difficult Or Unclear Phraseology?

      1. Are the words simple enough for the least educated respondent?

      2. Are any terms used in a specialized way and, if so, is the meaning made clear by pictures or otherwise?

      3. Is the sentence structure short and simple? Is there any looseness or ambiguity as to just what is referred to? What else could the question mean to a respondent?

      4. Is the meaning clearly distinguished from other ideas the respondent may think the question asks -- ideas that may seem more natural or important to him?

      5. Could unintended emphasis on a word of phrase change the question meaning?

   B. Does The Question Adequately Express The Alternatives In Respect To The Point Asked About?

      1. Are the comparisons that are to be made clearly specified?

      2. Are all important alternatives considered? Are they made explicit?
C. Is The Question Misleading By Reason Of Unstated Assumptions Or Unseen Implications? Is The Frame Of Reference Clear And Uniform For All Respondents?

1. Does the question bring out the basis for the respondent's reply -- the frame of reference within which he is answering?

2. What consequences of the proposed action does he see?

3. Does the question distinguish between what he wishes to have true and what he thinks is true?

D. Is The Wording Biased? Is It Emotionally Loaded Or Slanted Toward A Particular Kind Of Answer?

1. Does it employ stereotypes? Does it contain prestige -- carrying names? Does it employ superlative terms which push the answer one way or the other? (If such elements of bias are present; are they there intentionally -- and does the research purpose justify their inclusion?)

2. Does the question tend to elicit replies that are more one-sided than those the respondents would give on the same point if they had opportunity to answer freely and fully?

3. Would the question wording be acceptable to persons with opposite views on the matter?

E. Is The Question Wording Likely To Be Objectionable To The Respondent In Any Way?

1. Will it cause embarrassment, annoyance, or other negative feelings?

2. Can it be made more acceptable by changes in wording?

F. Would A More Personalized Or Less Personalized Wording Of The Question Produce Better Results?

1. Should it be phrased in terms of the respondent's personal action (his vote, etc.) and impact of the matter on him (taxes, etc.), or should it avoid such personal references?

2. Is it preferable to use "Do you think thus or so?" or the more objective "Is thus and so true?" or "Should thus and so be done?"
G. Can The Question Be Better Asked In A More Direct Or More Indirect Form?

1. Will it be more likely to elicit the desired information or attitudes if these are not asked for explicitly?

2. Can the information or attitudes be safely inferred from responses to an indirect form of the question?

III. Decisions Regarding Form Of Response To The Question

A. Can The Question Best Be Asked In A Form Calling For Check Answer (Or Short Answer Of A Word Or Two, Or A Number), Free Answer, Or Check Answer With Follow-up Free Answers?

1. For the purpose of the particular inquiry, is it better to obtain a choice limited to specific alternatives or to obtain a variety of volunteered answers? Can check answers cover what is needed? Is the issue well enough crystallized in people's thinking to warrant check responses?

2. Can free answers be sufficiently guided for the purpose of the study without introducing interviewer influence? If follow-up questions are to be used, can they be clearly specified or should the interviewer be permitted some leeway? Within the limits of the study, will it be feasible to tabulate and analyze detailed responses to open-ended questions?

B. If A Check Answer Is Used, Which Is The Best Type For This Question -- Dichotomous, Multiple Choice ("Cafeteria" Question), Or Scale?

1. If a scale is used, should it be a refined and calibrated scale or will an arbitrary form suffice?

C. If A Check List Is Used, Does It Cover Adequately All The Significant Alternatives Without Overlapping And In A Defensible Order, Is It Of Reasonable Length, And Is The Wording Of Items Impartial And Balanced?

1. Are the alternatives sufficiently definite and specific and as far as possible free from vague, qualitative words?

2. Does the list provide for additions by the respondent -- and does it mistakenly rely on this instead of providing adequate alternatives?
D. Is The Form Of Response Easy, Definite, Uniform, And Adequate For The Purpose?

1. Do the questions avoid the need for mathematical computation on the part of the respondent and the interviewer?

2. Are pictures and examples used to clarify and simplify the response?

3. Are instructions to the respondent clear and easily followed in terms of the layout of blank spaces, boxes, columns, etc.? Is it clear whether the respondent is to check only one space or more than one? Is a place provided for every reply so that the coder can distinguish "don't know" and "no answer" from overlooked questions?

4. Is it clear whether a check list is to be read to the respondent, shown to him, or used only for the recording of responses? Are replies precoded as fully as feasible and desirable?

IV. Decisions About The Place Of The Question In The Sequence

A. Is The Answer To The Question Likely To Be Influenced By The Contents Of Preceding Questions?

1. Do earlier questions create a certain set or expectation which might influence answers to this question?

2. Do preceding questions aid the recall of ideas which bear on this question? Does this question become inappropriate if certain answers were given previously?

3. Does it ask for information given in an earlier question?

B. Is The Question Led Up To In A Natural Way? Is It Correct Psychological Order?

1. Are the questions properly grouped? Is the respondent's train of thought interrupted?

C. Does The Question Come Too Early Or Too Late From The Point Of View Of Arousing Interest And Receiving Sufficient Attention, Avoiding Resistance, Etc.?
1. Is the opening question simple, definite, interesting, within the knowledge or experience of respondents, free from personal embarrassment, etc.?

2. Are "touchy" questions placed toward the end of the questionnaire to ensure better rapport and to keep them from interfering with earlier questions?
This appendix is a collation of all logical and usable student responses (perceptual statements) to the questionnaire-interview schedule when used as a questionnaire in one of the twelve classrooms. The numerals to the right of some statements indicate the number of times that response was offered to that question by different students. Where no numeral appears it is understood that the response was made only once.

### CLASS MASTER KEY OF QUESTIONNAIRE RESPONSES

1. What does your teacher do to make you pay attention?

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turns off the lights</td>
<td>15</td>
</tr>
<tr>
<td>Calls our name</td>
<td>14</td>
</tr>
<tr>
<td>Gives 9th period</td>
<td>11</td>
</tr>
<tr>
<td>Asks for our attention</td>
<td>4</td>
</tr>
<tr>
<td>Sits down and waits</td>
<td>2</td>
</tr>
<tr>
<td>Gives you a talking to</td>
<td></td>
</tr>
<tr>
<td>Writes our names down</td>
<td></td>
</tr>
<tr>
<td>Warns you</td>
<td></td>
</tr>
<tr>
<td>Raises her voice</td>
<td></td>
</tr>
<tr>
<td>Stands us out in the hall</td>
<td></td>
</tr>
</tbody>
</table>

2. Where in the classroom does your teacher spend most of her time?

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>At her desk</td>
<td>20</td>
</tr>
<tr>
<td>In the front</td>
<td>10</td>
</tr>
<tr>
<td>At the chalkboard</td>
<td>5</td>
</tr>
<tr>
<td>In the back</td>
<td>2</td>
</tr>
<tr>
<td>Walking around helping us</td>
<td></td>
</tr>
</tbody>
</table>

3. What does your teacher do when you give a wrong answer?

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tells us to do it over</td>
<td>9</td>
</tr>
<tr>
<td>Calls on someone else</td>
<td>5</td>
</tr>
<tr>
<td>Marks it wrong</td>
<td>3</td>
</tr>
<tr>
<td>Gives our paper back so we can do it over</td>
<td>3</td>
</tr>
<tr>
<td>Circles a problem and gives it back so we can do it over</td>
<td></td>
</tr>
<tr>
<td>Explains it</td>
<td>2</td>
</tr>
<tr>
<td>Helps us get the right one</td>
<td>2</td>
</tr>
<tr>
<td>Says, &quot;Well, no.&quot;</td>
<td>2</td>
</tr>
</tbody>
</table>
Shakes her head no
Calls you up front and tells you what you did wrong
Puts our name down on a paper to have more work on it
Gives bad grades
Goes back over the question

4. What does your teacher do when you give a right answer?

Says, "That's very good." 15
Puts a check on the paper 4
Says, "That's right." 5
Says, "O.K." 3
Puts a smile on your paper 3
Gives good grades 2
She tells us she is happy
Marks it right
She smiles
Says, "Very nice."
Doesn't circle it
Nothing
Says, "Yes."

5. How do you know when your teacher is listening to you?

Looks at me 10
Answers me 5
Nods her head 2
Says, "O.K." 2
She gets very still
When she says, "That's right" or "That's not right"
Stops what she is doing
Walks around us
Asks what I want
Comes to us when we raise our hand
She is talking to you and helping you at the same time
Gives the answer you asked for
Shakes her head as she looks at you

6. How do you know when your teacher isn't listening to you?

She is talking to someone else 9
Doesn't look at you 6
She is busy with something else 4
Does not answer back 4
She is looking at another person 4
Keeps doing what she was doing
Doesn't give the answer you asked for
She is talking at the chalkboard
7. Do you ever get the feeling that your teacher is really trying hard to teach? What does she do when she is teaching?

- Writes on the board: 11
- Talks out loud: 6
- Tries her best to explain: 5
- Walks around: 2
- Reads from a book: 2
- Gives us assignments
- Has us review things
- Comes to your desk if you don't understand
- Makes sure we can hear
- Talks about what is in the book
- Gives tests
- Stands up and has us read or talk
- Tries to get the right answer from you

8. Does your teacher ever think anything is funny? What sorts of things does she think are funny? What does she do when something is funny?

- Jokes: 5
- Our drawings: 3
- A poem we made up: 2
- When she says something backwards: 11
- When she misspells something: 6
- Notes we write: 5
- If she is trying to tell us a story: 2
- Laughs: 23
- Smiles: 3
- When we tell her something funny that happened to us: 8
- Funny stories: 6

9. Does your teacher ever make you feel important? What does she do?

- Congratulates you when you give the right answer: 6
- Helps us do our work if we need help: 4
- Tells us we got good grades: 3
- Says we are handsome: 2
- When she checks something right: 2
- She shows us some pictures: 2
- Talks about what we did: 2
- Calls our name: 2
- Asks you to read to her: 2
- Asks us to explain something: 2
- Pays real close attention to me: 2
- Gives you grown-up jobs: 2
- Acts like you are big: 2
10. Does your teacher ever make you feel you are not important? What does she do?

No 21
When I get something wrong
Yells at me
When she says I missed all my problems
She said she must do all her work

11. Does your teacher trust you? How can you tell?

Lets you do important things 3
Lets me get in her desk 2
Lets you do a lot of things 2
Lets us check papers 2
Leaves her purse out
Lets me go get a drink
Thinks we don't copy
You tell her something and she says "O.K."
Lets me carry her purse
Lets me get in the closet
Trusts us to take good care of the books
Lets me handle the lunch money
Lets me go to the library
She says so
Lets us do things like cleaning off her desk
She lays things out that we could break
She sends you out in her car

12. Are there students in your class that your teacher does not trust? How do you know?

She trusts everyone 20
Won't let them do important things 3
Talks to them a few minutes
She thinks they copy off each other
She says she doesn't
She makes them stay in their seats
Won't let them take books home
She takes up their homework

13. What does your teacher do when a visitor comes in the room?

Tells us to be quiet 11
Acts nice 5
Talks to them 5
Asks what they want 4
Stops what she is doing and welcomes them 4
Goes into the hall
Says she will be back in a minute
Waits until the visitor leaves to tell the class what we did wrong
She keeps on teaching
Tells us to be still
Tells them to have a seat
Has us to go on with our work
Introduces them to the class

14. Does your teacher spend much time helping students? What does she do?

- Explains to the whole class: 11
- Helps them figure out things: 15
- Helps them get things right: 2
- Goes around looking at people's papers. If she sees a answer she helps you: 
- Helps groups of children: 
- Takes them to the board: 
- Tells us where to look for the right answer: 
- Gives individual help: 
- Shows them how to do things: 

15. Does your teacher do anything that makes you really like school?

- No -- nothing: 7
- Helps us and shows us how to do our work: 6
- Lets us play games: 5
- She is very nice to us: 2
- Lets us draw: 
- Lets us make things with paper: 
- Has contests and picks the best poster and gives prizes: 
- Gives us puzzles to work: 
- Lets us have free reading: 
- Makes us do little work: 
- Gives you work you want to do: 
- Gives us project we like: 
- Tries to make us feel that we like school: 
- Lets us go to the bathroom and get a drink: 
- Lets us do easy things: 
- Gives us homework and time to do it: 

16. Does your teacher do any thing that makes you really dislike school? What does she do?

- No: 21
- No she always lets us do something we enjoy: 3
- Makes us do lots of work: 3
- Gives us 9th periods: 
- She does not show us how to do anything: 

17. What does your teacher do when someone in the class acts up?

- Gives them 9th periods        24
- Calls them down              3
- Gets mad and yells           2
- She settles them down        2
- Takes them out in the hall
- Sends them to the office
- Writes down their name for 9th period
- Goes over and talks with them

18. Do you think your teacher likes teaching? How can you tell?

- She just acts like it         5
- She tries hard               3
- She helps everybody          3
- She has a happy look on her face
- She has been teaching over a year
- If you don't understand something and keep on asking the same question she doesn't get mad
- She is nice to us             2
- She likes teaching math
- She acts happy all the time
- She smiles a lot
- She would not be teaching

19. How do you know when your teacher is happy with what you've done?

- Smiles at us                  6
- Says, "Very good"              6
- Puts a smiling face on your paper  4
- Gives good grades             3
- Tells us she is happy         3
- She stands in front of the room and says she is pleased  2
- She acts real nice            2
- Congratulates you             2
- Calls you up and gives you an A
- Checks it right
- Lets you have study hall the rest of the period

20. How do you know when your teacher is not happy with what you've done?

- Gives bad grades              4
- Gets mad and tells us to go to our seats  4
- Says, "Do it over"             3
- Doesn't smile                 2
- Tells us she isn't happy      2
- She acts disappointed
She has a sad face
Checks it wrong
Tells at us
Puts nothing on your paper
Says, "You've been goofing off."
Tells you you need help on something
Puts a frowning face on your paper
Doesn't say anything
Says, "Was that a nice thing to do?"
Makes us work some more

21. Are there students in the class that your teacher really likes? How do you know?

Likes us all the same because she is patient or nice to us
Lets you do special things (pass out papers, etc.)
Acts nicer to them
She is always talking to them
She likes to work with them
She talks and laughs with them
Helps them more
She likes the nice students
She looks like she does
Acts good to them and tries to make them learn

22. Are there students in the class that the teacher doesn't especially like? How can you tell?

No, she helps us all
She always screams at them
She doesn't act like she likes them
Doesn't treat them as well
She doesn't act as nice as others

23. If you ever had to explain something to the teacher, how would you know that she really understood you?

Says, "Now I understand"
She tells you that's right
She gives you an answer
She answers back
She reads something to me
She says sentences like what I asked her
She says that was really interesting
She listens
She doesn't question you about it
24. How do you know when your teacher doesn't understand you?

- She says she can't understand 8
- Says what do you mean 5
- She says what was that again 4
- She says repeat it 3
- She says that's wrong 2
- She looks at you funny
- She doesn't answer back
- Tells me to do it over
- When she starts explaining

25. What does your teacher do when something she is trying to demonstrate or explain messes up?

- Does it over 16
- She laughs 2
- She believes it turned out O.K.
- Tries to make the best of it
- Gets mad
- Asks us to help her
- Doesn't like it too much
- She says she didn't mean it
- She feels sad
- Shows why it went wrong
- Says she messed up and explains it
This appendix is a collation of all logical and usable student responses (perceptual statements) to the questionnaire-interview-schedule when used as an interview-schedule in one of the twelve classrooms. There were five students interviewed in this class. It might be noted that for some items there are five statements, whereas other questions have many more responses. The explanation for this lies in the fact that some students gave more than one response to some of the questions. The numerals to the right of some statements indicate the number of times that response was offered to that question by different students. Where no numeral appears it is understood that the response was made only once.

CLASS MASTER KEY OF INTERVIEW RESPONSES

1. What does your teacher do to make you pay attention?
   Tells you to pay attention
   Sends you out in the hall
   Lets us go to our lockers if we are quiet
   She would call on us and if we did not know the answer she knows we aren't paying attention
   Has us stand up and put our hands on our head
   Calls out your name
   Says, "Look up here."
   Slams her hand on the desk
   Makes us stay after school
   Threatens to give us a quiz
   Gives us a quiz
   Says, "Be quiet people." 4

2. Where in the classroom does your teacher spend most of her time?
   Walks around the room
   At the desk 3
   At the front board 3
3. What does your teacher do when you give a wrong answer?

- Shakes her head no
- Calls on someone else
- Says, "No, that's not right."
- Says, "No."
- Corrects you
- Says, "Come on people."

4. What does your teacher do when you give a right answer?

- Brags on you
- Says, "Very good." 2
- Says, "Yes."
- Says, "O.K."
- Says, "Excellent."
- Says, "That's good." 3
- Looks happy
- Smiles 3
- Says, "Agree."

5. How do you know when your teacher is listening to you?

- Nods her head
- Writes our answers on the board
- Acts interested by the way she looks in her eyes
- She looks concerned
- No one else is talking
- She is not talking
- Says something about what you did 2
- She is looking at you

6. How do you know when your teacher isn't listening to you?

- Acts like she didn't hear you
- Goes on to other things
- Turns her head
- Another student is talking
- Usually when she is talking
- She is trying to keep the class quiet
- She is talking to someone else 2
- Looking at the papers
- Looks at someone else
- If you ask her a question she doesn't answer it
- Isn't looking at you
7. Do you ever get the feeling that your teacher is really trying hard to teach? What does she do when she is teaching?

Gives extra time to get our work
Gives a lot of homework
Gets the class quiet
Looks happy
Gives pop quizzes
Tells us about tests
Answers our questions
Helps people do experiments
Gets excited
Writes stuff on the board and wants us to copy it

8. Does your teacher ever think anything is funny? What sorts of things does she think are funny? What does she do when something is funny?

When you give a funny answer
When she makes a mistake
Jokes
Laughs
Grins

9. Does your teacher ever make you feel important? What does she do?

When she calls on you and you get the right answer and no one else can
When she gives me a special report she doesn't think anyone else will have time to do
If we do something right she tells us
She congratulates us
Says, "Well good."
That was a good answer

10. Does your teacher ever make you feel you are not important? What does she do?

Says, "You can do better than that."
Calls out your name and embarrasses you when she is mad at you
If she lets someone do something and I ask her to do something that really needs to be done and she won't let me do it, then she does it herself.
Doesn't pay attention to me

11. Does your teacher trust you? How can you tell?

Lets me do things
Counts on them to bring things to class
Lets me be a lab helper to put away the glass
12. Are there students in your class that your teacher does not trust? How do you know?

Won't depend on them
Won't let them take things to the storage room

13. What does your teacher do when a visitor comes in the room?

Pays attention to the visitor
Doesn't pay attention to us
Tells us to be polite
Helps them find something
Waves her hand to keep us quiet because she doesn't want to say be quiet in front of another person
She is real nice to us
She is real nice to the visitor
Wants us to be real quiet
Finds out what they want
Makes us go on with our work
If someone is going to talk to us she tells us to get out our notebooks
Goes on with her work

14. Does your teacher spend much time helping students? What does she do?

Calls you up to her desk so she can help you
Goes around helping us
Helps us read
Helps us do experiments
Helps you after school
If we are doing something wrong she tells us
Tells us how to do things
Answers our questions
If we raise our hands she comes to our desk and gives examples
Takes you up the board and helps you
Explains things

15. Does your teacher do anything that makes you really like school?

Doesn't give much homework
We get to do a lot more things in science
Lets us do experiments
16. Does your teacher do anything that makes you really dislike school? What does she do?

- Gives us book reports
- Having us copy things off the board
- When we have to read a lot of pages
- Doesn't take any excuses for incomplete work
- Gives work and not time to do it

17. What does your teacher do when someone in the class acts up?

- They have to write a 500 word essay
- Tells them if they do it again they will have to stay 30 minutes but they never stay that long
- Makes them stay after school
- Tells them to be quiet
- Calls their name
- Makes them stand up and put their hands on their heads
- Sends them to the office
- Takes them out in the hall

18. Do you think your teacher likes teaching? How can you tell?

- She looks happy in her work
- Gets excited in her talk
- She talks to us
- Takes pain in her work
- Says so
- Smiles a lot
- Comes in in a real good mood
- Likes to do stuff with the students
- Kind to the students
- Helps us
- Pays a lot of attention to us

19. How do you know when your teacher is happy with what you've done?

- Writes nice things on your paper
- Tells you
- Brags on you
- Smiles at you
- Says, "Good"
- She goes faster asking questions
- Gets excited
20. How do you know when your teacher is not happy with what you've done?

Says, "Ah, you should have done better."
Won't give good grades
Says, "Now what do you think your grade will be on that?"
Gives a puzzled look
Gives a funny look -- one eyebrow down and the other one up
Frowns and looks at you out of the corner of his eyes
Says, "That's not right!"
Says, "Come on."

21. Are there students in the class that your teacher really likes? How do you know?

Compliments them more
Says, "Very good" to them
Always calls on them
Lets them do more things like take the glass to the storage room

22. Are there students in the class that the teacher doesn't especially like? How can you tell?

They never get their work in so she tells them they better get it in the next day

23. If you ever had to explain something to the teacher, how would you know that she really understood you?

She tells you she understands
Nods her head and says, "Yes."
Says, "Yes, that's good." 2
She would tell me what something meant

24. How do you know when your teacher doesn't understand you?

There is a puzzled look on her face -- mostly in her eyes
Says, "No."
Says, "Uh? Say that again."
Doesn't pay attention
Asks you to repeat it 3
Makes a wrinkle in her forehead
Looks at you and frowns
25. What does your teacher do when something she is trying to demonstrate or explain messes up?

Says, "I am sorry. I'll try it another way."
Says, "I am sorry that's not right."
Gets mad at herself
If it is anything bad she would get upset
Giggles 2
Does it over 4
TRANSCRIBED INTERVIEW

1. What does your teacher do to make you pay attention?

Student: She either says, "Can I have your attention please?" or "Would you be quiet for a second so I can give you these instructions?"

Interviewer: O.K., Does she ever do anything else?

2. Where in the classroom does your teacher spend most of her time?

Student: At her desk helping you or at your desk helping or checking papers.

Interviewer: Any other place?

Student: No.

3. What does your teacher do when you give a wrong answer?

Student: She corrects it if it is wrong and asks you again if you can get it right.

Interviewer: O.K. Does she do anything else then or does she ever do anything beside correct or marks it wrong?

Student: She helps you.

4. What does your teacher do when you give a right answer?

Student: She checks it right.

Interviewer: Does she ever do anything or say anything else?

Student: That's good.

Interviewer: Do you like it when she says, "That's good."

5. How do you know when your teacher is listening to you?

Student: When she's looking at you and paying attention and no one else is talking to her.

Interviewer: She's looking at you? Where does she usually look?
Student: At you or she pays attention to you mostly all the time.

Interviewer: She looks in your face let's say. She's not talking to anyone else. As she listens and as she looks does she ever do anything else that lets you know?

Student: Sometimes she talks back to you and then a few times she says, "That's good.", "Yes" or "No." or something like that.

Interviewer: Nod her head?

Student: Yes.

6. How do you know when your teacher isn't listening to you?

Student: She's looking off from us or talking to someone else.

Interviewer: O.K. Any other ways that you can tell that she's not listening?

Student: Well, she's not nodding her head back at you or saying anything back to you.

7. Do you ever get the feeling that your teacher is really trying hard to teach? What does she do when she is teaching?

Student: Well, she says you all be quiet, because I'm trying to teach you. This is what you come to school for.

Interviewer: Can you think of some things she would do while she was teaching a lesson?

Student: If you got a question you can raise your hand and she'll explain it. She explains it before you get ready to do it.

Interviewer: Does she ask a lot of questions?

Student: No.

Interviewer: Does she answer a lot of your questions?

Student: Yes.
8. Does your teacher ever think anything is funny? What sorts of things does she think are funny? What does she do when something is funny?

Student: Sometimes when the class bell rings and we're not in class, you tell her something funny she might think it's funny.

Interviewer: What does she do when something's funny?

Student: She giggles for a minute and that's all.

Interviewer: Is that about the only thing she does when something is funny?

Student: Oh, she might laugh or something like that, but not very long.

Interviewer: Is that the only kind, the one thing you said, is that the only thing she would think is funny?

Student: Oh, something like falling back in your chair or something like that on purpose.

9. Does your teacher ever make you feel important? What does she do?

Student: She makes everybody feel important. Well, mostly when you get an "A" or something like that and she says, "Good" or "That's really good." and marks it down for an "A". She says you've got an "A".

Interviewer: So good grades and saying that you're good and complimenting you, that makes you feel pretty good?

Student: Yes.

10. Does your teacher ever make you feel you are not important? What does she do?

Student: No.

Interviewer: Never does with anyone?
11. Does your teacher trust you? How can you tell?

Student: Yes, you say you have an assignment to do and you didn't get it in that day and you say, "Well, I'll have it in tomorrow." She trusts you and she says O.K.

Interviewer: Is that the only thing that's a cue that she trusts you?

Student: She might trust you like you go down to the office and you said you'd be back real soon. She might trust you like that or something.

12. Are there students in your class that your teacher does not trust? How can you tell?

Student: Might be one or two. I don't know.

Interviewer: What gives you that feeling?

Student: Because they always take stuff and never bring it back or when they say they'll bring it in the next day they never bring it back.

Interviewer: Does she ever give you any clues that she doesn't trust them?

Student: No.

Interviewer: She always makes you think that she does trust them?

13. What does your teacher do when a visitor comes in the room?

Student: She talks to them. She's real polite to them. We go ahead with our lesson and she helps us when she can and talks to them.

Interviewer: O.K. Would you think she teaches the same way?

Student: Teaches the same way -- what do you mean?

Interviewer: Does she teach the students in the class the same way when a visitor comes in?

Student: Yes, sure.
14. Does your teacher spend much time helping students? What does she do?

Student: Yes, if they want it and they really need help she helps them as much as she can.

Interviewer: O.K. When she's helping them what are some of the things she would do?

Student: Answers their questions, explain how to do it or help them.

Interviewer: Where in the class does she get to help them?

Student: She goes to their desk or they go up to her.

Interviewer: O.K.

15. Does your teacher do anything that makes you really like school?

Student: Yes, she teaches good and never makes you do a lot of work.

Interviewer: Anything else?

Student: No.

16. Does your teacher do anything that makes you really dislike school? What does she do?

Student: No.

17. What does your teacher do when someone in class acts up?

Student: She tells them to settle down and do their work.

Interviewer: Anything else?

Student: She tells them not to goof around anymore or she'll make them stand out in the hall.

Interviewer: Right at the time someone is goofing off can you tell she is going to get after them?

Student: No, she just tells them to be quiet.
18. Do you think your teacher likes teaching? How can you tell?
   Student: Yes.

   Interviewer: What makes you say that?
   Student: Well, she enjoys teaching. She helps you a lot. When you ever have a question she answers it. She explains a lot.

   Interviewer: Does she seem excited about teaching?
   Student: A little, she likes it and she likes to have children around her all the time and teach them and help them.

19. How do you know when your teacher is happy with what you've done?
   Student: She tells you it's good, real good then puts a good grade down in her book.

20. How do you know when your teacher is not happy with what you've done?
   Student: She says, "That's not good. You ought to be able to do better than that."

   Interviewer: O.K.

21. Are there students in the class that your teacher really likes? How do you know?
   Student: She likes everybody.

   Interviewer: She likes all of you?
   Student: Yes.

22. Are there students in the class that the teacher doesn't especially like? How can you tell?
   Student: No.

23. If you ever had to explain something to the teacher, how would you know that she really understood you?
   Student: Like a while ago, she nods her head then asks you a few questions about it; then if you answer them right she says, "That's real good, real fine." I guess that's it.
24. How do you know when your teacher doesn't understand you?

Student: She'll ask you a question. She'll say she didn't quite understand that or something like that.

Interviewer: Does she have any kind of a look on her face?

Student: No.

Interviewer: Just the same look?

Student: Yes.

Interviewer: Not puzzled?

Student: A little.

25. What does your teacher do when something she is trying to demonstrate or explain messes up?

Student: She erases it and puts it down and says, "I'm sorry I messed up."

Interviewer: Would she get upset?

Student: No.

Interviewer: Would she laughed about it sometime?

Student: Sometimes.
This appendix contains a collation of all logical and usable student responses (perceptual statements) to the questionnaire-interview-schedule over all twelve classes regardless of whether obtained by questionnaire or interview.

1. What does your teacher do to make you pay attention?

Calls out your name
Gives you a 9th period -- makes you stay after school
Threatens to make us stay after school
Yells at us
Says, "Listen" or "Pay attention"
Says, "All eyes up front." or "Turn around."
Turns off the lights
Claps her hand
Holds up a sign that says, "Cool it." and taps on the back of it. When we get quiet she holds up a sign that says, "Thank you, you are polite."
Sends us to the office
Writes things on the board like, "Be quiet!"
Her face looks mad
Says, "Shut up."
Makes us put our hands over our mouths
Makes us stand up with our hands on our heads for 10 minutes
Writes our names down
Stands us out in the hall
Gives us more work
Tells us we will get the wrong answer
Clears his throat
Beats his desk with his hand
Stands up
If someone isn't listening he asks them a question and catches them off guard
Holds her ears
Gets out the paddle
Stops talking and waits
Slams the door
Looks you in the eye with a stare
Says, "The longer you talk now the longer you will have to stay after class."
Makes us write something 100 times
Makes people stand in the corner
Moves you from where you are sitting
Taps a ruler on the desk
Throws away your paper
Hits the chalkboard with a yardstick  
Stands with her hands folded waiting for us to get quiet  
Turns real red  
Asks us if she is disturbing us  
Says, "You are disturbing the class next door."  
Jerks you  
Says, "Well!"  
Makes me lay by his desk  
Talks loud enough to be heard above the noise

2. Where in the classroom does your teacher spend most of her time?

At the desk  
In the front  
All around the room helping us  
In front of the maps  
By the heater at the window  
Up at the table helping the class  
In the back of the room  
In the corner  
In a chair at the front  
By the door  
Right in the middle  
On the side of the room  
By the bookshelves

3. What does your teacher do when you give a wrong answer?

Says, "No! That's not right."  
Asks someone else to correct them  
Explains it to us  
Tries to help us  
Has you to correct yourself  
Marks it wrong  
Asks you to try again  
Tells us the right answer  
Says, "Sad, sad, sad."  
Tells us to go back and correct our mistake  
Says, "Wrong."  
Gripes and says, "Think and try again."  
Says, "You didn't study very good."  
Says, "Look at that. Is that right!"  
Says, "You could have done better."  
Gives you bad grades  
Shakes her head no  
Says, "Nope."  
Kind of laughs  
Says, "Is that so?"  
Sits there and looks funny at us
Says, "That's the right idea, but..."
Says, "I'm sorry."
Circles the wrong answer
Goes back over the question
Points at you
Waits for you to answer again
Makes you write the right one ten times
Says, "Now wait a minute."
Fusses at you for a while
Says, "You mean I have been up here talking about that for nothing."
Asks where have I been
Puts a zero on the paper
Tries to crack your face
Doesn't do anything but repeat it
Takes points off your grade
Gets smart with you
Asks if we read the directions

4. What does your teacher do when you give a right answer?

Compliments me by saying things like: very good, right on, hey, you're catching on
Says, "Yes" or "Yes, that's right," or "O.K."
Puts a check on your paper
Shakes her head
Goes on to the next question
Smiles and is very happy
Gives good grades
Says, "Anyone have a different answer."
Repeats what we say
Starts talking about it
Sometimes she'll act like she doesn't care
Gives you a pat on the back
Puts a good note on your paper
Points to you and has you come up and tell the whole class
Asks us other questions about it
Says, "Thank you."
Writes your answer on the board
Laughs
Makes a joke
Puts a happy face on your paper
Claps her hands
Nothing, just leaves it as it is
Tells everyone else to listen to my answer
Asks me to repeat my answer
Asks if we guessed or really knew
5. How do you know when your teacher is listening to you?

She talks about what you are telling her
She looks right straight in your eyes
Nods her head
Makes comments like "Yes" or "O.K."
Tells the class to stop talking so she can hear
She does not talk to anyone else
She answers you
Looks like she is thinking about it by squinting her eyes
and trying to picture what you're saying
She asks questions about what you said
Doesn't talk while you are talking
She walks near you
She smiles at you
Stands there and waits
Waits until we are done then answers our questions
Tells it to the class and has them repeat it
Writes what we say on the board
If anyone bothers us he tells them to go sit down
Corrects our speech
Stops what she is doing
She asks what I want
He doesn't always go along with you
Doesn't look around for people talking
She looks over your shoulder
She repeats it after us
Looks at our papers
Looks up

6. How do you know when your teacher isn't listening to you?

Looks the other way
Talks to someone else
Keeps on working, writing
Looks at someone else
Stares into space
Looks out the window
Doesn't look at you
Says, "Yes, you told me."
 Doesn't say anything
When you talk to her she tells you to shut up
Says, "Tell me after school."
She asks you to repeat it
Her eyes wander
Doesn't give the answer you asked for
Looks like she is thinking about something
7. Do you ever get the feeling that your teacher is really trying hard to teach? What does she do when she is teaching?

Talks and explains
Asks questions
Answers questions
Writes on the board
Gives us examples
Gives assignments
Checks our papers
Lets you ask questions
Has us read things in our books
Does experiments
Helps us look up answers
Gives us a lot of work
Writes everything on the board that we need to put in our notes for tests
Lectures
Sometimes uses hands a lot to point out things
Comes to your desk if you don't understand
Brings extra materials, films, speakers
Shows pictures

8. Does your teacher ever think any thing is funny? What sorts of things does she think are funny? What does she do when something is funny?

When someone says something funny
When someone asks a dumb question
Funny answers
Really wrong answers
Jokes
Stories we tell her
When we miss problems and don't know how to do it
When she forgets what she has done
Someone falling out of a chair
Something funny in a book
When she calls your name wrong
Things we think are funny
Tricks we play on her
T. V. shows
Slogans
When someone drops their books
When someone forgets what they were going to say
Tries to make it funny when someone acts smart
When we draw something funny
When she says something backwards
When people talk fast
When we are looking funny
People make smart remarks about what she says
When he walks in and we say, "Boo"
A funny look on her face
She giggles to herself or sometimes out loud
Laughs
Smiles
Frowns
Grins
Gets mad

9. Does your teacher ever make you feel important? What does she do?

Tells us we got good grades
She says, "Good."
Lets me sit at her desk
Smiles at me
Lets us run errands
Lets us come up to the front of the room to read
She told me something was right
He talks with us
Helps me with my work when I don't understand
When you are the only one in class who gets the right answer and he tells the whole class
She talks to us and makes us feel that she knows what we are doing
He lets us do puppet shows
Lets us do bulletin boards
Says, "You are doing great. I think you are the best in the class."
She looks good at you
Gives you more work that is higher
Pays attention to you and hangs around you
She tells me I did good on tests
When she gives me a special report she doesn't think anyone else will have time to do
She pats me on the back and says, "Good job."
Asks you to read to her
Gives you grown up jobs
When he gives me another chance

10. Does your teacher ever make you feel you are not important? What does she do?

When I talk she doesn't listen to me
Says, "There is going to be trouble or a lot of bad grades."
Sends me away when I try to tell her something
Gives bad grades on my papers
Makes me stay after school
Tells me I am not right all time
Says, "Forget it," to me
Screams at me
Gives me more work
Never checks my papers
Embarrasses you in front of everyone
Makes fun of me
Does not ask me questions
Never lets you answer questions you want to
Sends you to the office
Puts you down
Puts an "X" on my paper
Won't let me go to my locker
Tells you your work is awful
Does not talk to you
Makes you do things you don't want to do
Tells us something is none of our business
Says, "Shut up and sit down!"
Lectures to me
Ignores me -- never listens to me -- won't look up at you
Won't look at you, just some people
If you answer wrong she goes to another person and won't give you a chance
If you raise your hand she won't call on you
Sort of forgets about you. Then on hard questions calls on you.
Says, "You ought to know that."
Says, "That's a stupid answer."
Makes you stand in the corner
Tells us we have a bad note for our parents
Says our work is terrible
Never talks about the things you do or say
Never calls on me to do any thing
Says, "You are wrong." real loud
Tells you you goofed it
Says she doesn't have time for me
When I do something for her and she doesn't thank me
Takes me out in the hall for a talking
When I forget my work he won't let me get it
Stands in front of the class and says stuff about you
Calls us names like "Knuckle head"
Makes you sit on the floor beside him
Never mentions my name
Doesn't help me with my work
Stares at me
Points a pencil or finger at me
11. Does your teacher trust you? How can you tell?

Trusts you to go places and back
Lets me do things for her like put stuff away
Doesn't act suspicious of me
Lets me bring her pocketbook
Lets me take the lunch money to the office
Lets me check papers
Sends me on errands
Lets me take notes to other teachers
Lets me go to her car to get things
Leaves her purse on her desk
Lets me get things out of her desk
Let us use filmstrips
Lets me work on the bulletin board
Lets us take the paint brushes out
Lets me borrow a pencil and knows I will give it back so she doesn't remind me
Lets me go to the library
Lets us keep answer cards to SRA
Lets me clean his desk off
Lets me take my book home
Lets me be a lab helper and put away the glass
Leaves the room
Doesn't keep her eye on you to see if you are copying
Doesn't escort me to the office

12. Are there students in your class that your teacher does not trust? How do you know?

Never lets them do any thing
Says, "No cheating on the test."
By the way she looks at them sometimes
Won't let them take stuff to the office
Never lets them take the lunch report down
Won't let them check SRA's
Checks their papers when they make a 100 the first time
If you ask her to do something first and then someone else asks, she will let them do it
She goes around watching them
She keeps on saying, "Are you sure?"
She calls you out when something is done
Doesn't give them responsibility
She sort of looks at them funny
Takes some kids out in the hall
Sent a note home to someone's parents
Makes other people check our work
Makes them sit by themselves
Won't let them take books home
She takes up their homework
Yes, because he looks straight at them in the eyes
Yes, by sending someone to the office
Gets someone to go with you somewhere
She has an angry expression on her face toward them
She'll come around and tear up what you are doing and fuss at you
Says she thinks she knows who got something and looks straight at them while she is talking

13. What does your teacher do when a visitor comes in the room?

Pays attention to the visitor
Doesn't pay attention to us
Tells us to be polite
Helps them find something
Waves her hand to keep us quiet because she doesn't want to say be quiet in front of another person
She is real nice to us
She is real nice to the visitor
Wants us to be real quiet
Finds out what they want
Makes us go on with our work
If someone is going to talk to us she tells us to get out our notebooks
Goes on with her work
Talks to the visitor
Tells us to get them chairs
Tells us to do what the visitor says
Tells us to listen to the person
Gives motions for us to be quiet so she can talk to them.
Putting her hand out or her finger to her mouth
Asks them to sit down
Introduces them to us
Gives us lessons to work on
Sits down and listens to them
If he knows the visitor is coming he has us to be real quiet
They tell him something and he teaches it
Tells us not to ask questions until the visitor leaves
If you act up when the visitor leaves he will send you to the office
Makes us stay after school if we talk
Asks questions about what he says
Looks at us with a mean look that says shut up
Beats on her desk for us to get quiet
Tells us what the visitor is going to do if he knows
14. Does your teacher spend much time helping students? What does she do?

Calls you up to her desk so she can help you
Goes around helping us
Helps us do experiments
Helps you after school
Answers our questions
Takes you up to the board and helps you
Explains things
If they raise their hand she comes to them
When two or three students have asked the same question
she explains it to the whole class
Helps us find the right page
Helps us get the right answers
When the floor gets full he has us raise our hands
Gives us directions
 Tells us step by step how to do our lessons
Holds books up that we can use
She listens to us
She sits in the middle of the room and you go up to her
and she helps you
Has book conferences
Asks them questions
Lets us line up at the left side of his desk for help
Helps us with words
Spends her time trying to check papers
Just tells us to find the answers on our own
Tells us where to put the answer
Explains assignments again
Helps us with our homework
He helps when we get stuck on something
Gives us clues
Gives us papers to study like study guides

15. Does your teacher do anything that makes you really like school? What does she do?

We get to do a lot more things in science
Lets us do experiments
Tells us we got good grades
Talks about things that happen at home
Has spelling bees
Gives us a choice of things to do in class
Plays a game every now and then that is supposed to help us learn
Lets us take up lunch money
She tells us jokes
If someone doesn't understand something she goes over it again
When I draw pictures she likes them
When he comes around and helps us  
Takes us on field trips  
Gives us a break every once in a while  
He writes things on the board  
Sometimes he lets us color in mimeograph sheets  
Gives us math work sheets  
Some of his tests are fun  
Lets us do plays and skits  
If you are sick she has everyone sign a card and sends it to you  
Lets us talk a little  
Yes, lets us pass out papers  
He lets me draw pictures in study hall  
Yes, he doesn't make us ask to go somewhere we sign a clipboard  
Yes, lets us read books and other things  
Lets us make things with paper  
Gives us puzzles to work  
Gives us projects we like  
Play records and sing  
Lets us bring out pets to school sometimes  
She gets speakers  
She is going to give us paper money and see how well we can keep a budget  
She said she would buy everyone a coke if they got an A on the spelling test  
Makes you laugh and makes your troubles go away

16. Does your teacher do anything that makes you really dislike school? What does she do?

Gets mad at me  
Makes us study real hard for tests  
Gives us a lot of work  
Gives me hard work  
Sometimes when she explains something and you forget how to do it and tell her she says, "You should remember how to do it."  
Gives too many assignments  
Makes me stay after school  
Makes us read  
Yells at us  
Gives us homework  
Sends us to the office  
Has us copy things off the board  
Doesn't take any excuse for incomplete work  
Fusses a lot -- yells all time  
 Tells us to sit down and shut up  
Makes us do reports  
Does not show us how to do anything
Tells everyone I made bad grades
Blames stuff on me
Doesn't play around with us
Ignores you
She acts grouchy
She hardly ever smiles or laughs
She hit me
Never compliments you

17. What does your teacher do when someone in the class acts up?

Gives them a 500 word essay
Tells them if they do it again they will have to stay in
Makes them stay after school
Tells them to be quiet
Calls their name
Makes them stand up and put their hands on their head
Sends them to the office
Takes them out in the hall
Sends them out in the hall
Sends them to the principal with a note
Looks at them out of the corner of her eye
Gets mad and real red
Stares at them
Tells them to settle down and get to work
Makes us stand in the corner
Warms them a couple of times
Makes us put our hands on our mouth
Sits them in a chair by themselves
Cuts his eyes around sharp at them
Makes the whole class stay after school
Talks to them and explains what they did in the class
Makes them sit down
Motions with her finger for them to come there
Gives 5 or 10 minutes of silence
Says she doesn't want to see it again
Makes them sit by his desk
Yells at them
Pulls their hair
Goes over and talks with them
Taps you on the head
Shakes them
Gives them a lot of extra work
Paddles us
Sends a letter home or calls home
Gets his paddle out
Makes them stand up for 15 minutes
Tries to embarass them
Tells them to move
Draws a circle on the board and makes them put their noses in it
Keeps on talking and ignores them

18. Do you think your teacher likes teaching? How can you tell?

He likes to help us
He likes to show us things
He acts like he enjoys it
She tackles her work and tries real hard
She gets excited
She explains lessons well
She seems to put a lot of interest in her subjects and the students
She has good art work in the room
She writes real good
She has a lot of books for us
He laughs even if we get our answers wrong
She is always talking and happy
She always sits around and talks with us
She is always pushing along
Comes in in a real good mood
Goes to a lot of trouble to get special speakers
The way she talks about things -- she expresses her feelings
She is always anxious to put something on the board
He claps his hands and snaps his fingers

19. How do you know when your teacher is happy with what you've done?

Because she tells us that she is proud of us
The way she looks at you and smiles
She gives you a pat on the back and a big fat jolly smile
She tells you that you are doing good
When she lets us do something
She smiles and congratulates us
She praises you
When she won't make us do homework
She will give you an "A+" on your paper
Puts a smiling face on your paper
Lets you have study hall the rest of the period
She puts it on the bulletin board
She will tell it to the class
Claps his hands
Says, "Keep it up."
She goes faster asking questions
Gets excited
Puts the grade in her book
She lets you do what you want after you finish your work
Pats me on the head
Lets you stand up if you get a good grade
Says, "That's wonderful."
20. How do you know when your teacher is not happy with what you've done?

Doesn't say much
Frowns
Gives us bad grades
Tells us it is wrong
Gets mad
Says, "O.K." instead of "Good."
She gets on us
She won't pay attention to you
She helps you get the right answer
Gives a hard look
Says, "You need a lot of work on that."
Says, "Sad, sad, sad."
Says, "You are wrong; you're guessing."
Acts kind of disgusted with your work
Gives you fair on your paper
Goes, "No."
Gives your paper and doesn't talk about it much
Tells you to read more about it
Tells you to go back to your seat and do it over
She squinches her eyes and tries to explain it again
Always yelling
Says, "If you don't want to learn she can't help us."
Gives a puzzled look
Says, "Come on."
Gives us 7th period
Tells us to shape up
Sends us to the office
She says you have done poorly
She fires you a dirty look
She says I like people who tell me the truth
Takes you out in the hall
Rips up our papers and gives them back
Puts a big X on it
Gets his paddle out
She folds up her arms and puts out a little breath
He gives you a fake smile
She will say, "You are smarter than that."

21. Are there students in the class that your teacher really likes? How do you know?

She doesn't have pets, she likes everyone
Yes, because she lets them sit up by her desk and talks to them
Yes, she lets them do things
Yes, when she talks nice to that person
Yes, by just talking in a happy way all the time
Yes, because she cuts up with them all the time
She calls on them more than others
She lets you borrow money when you need it, then you pay her back
He takes up for them
She gives them lots of hugs and she lets them check out papers for the scores
She lets them put grades in her grade book
Doesn't yell at them
Lets them do what they want
She winks at them
She won't act mad at them when they give the wrong answers
Pays more attention to them
He asks that person if they want to go home with him
Speaks to them in the morning
Lets them get by with stuff
He comes to their desk and asks them how they are doing with their work

22. Are there students in the class that the teacher doesn't especially like? How can you tell?

He is always getting after them
He gives them mean looks
Doesn't pay any attention to them
Doesn't let them do any thing
She acts like she doesn't like them
She has a frown on her face when she teaches them
Pours the work on them
He sends them to the office a lot
Gave them 7th period
Yells at them
Doesn't listen to them
She never picks you when your hand is up
She will tell them to sit down and shut up
Pushed them around
Doesn't say anything about them
She gets mad at them for little tiny things
He does not talk to them
She says things in a hard voice to them
Smarts off at them
She laughs at them
Never lets them draw
She makes them stand in the corner

23. If you ever had to explain something to the teacher, how would you know that she really understood you?

She asks a question about it
She tells me she understands
She smiles and says, "O.K."
She shakes her head yes -- nods
She says, "That's good" or "That's wrong."
She would correct you
She talks about what you told her
She doesn't do anything
She looks at me
She tells us to explain it to the others
She asks where you found the information
She answers me with the right answer
She reads something to me
She says that's really interesting
Gives an example using that idea
Uses her words to tell the class.
The expression on her face -- sort of happy
She repeats it
Goes further into detail
She says, "Yea." and goes on to another subject
She keeps with you until she does
Keeps the subject up
Takes you in the hall and talks about it
Looks in the book and has us read something to her
She uses what you say and talks about it
Puts it in easier words
Tells me to put in the words I leave out
Tells you he doesn't know the answer
Tells you to write what you said on the board
Looks at the book then at you out of the corner of his eye.
   When you're ready he turns the page
She doesn't always agree with you

24. How do you know when your teacher doesn't understand you?

Says, "O.K. now go back to your seat."
Says that he didn't understand
Asks us to go back over it
Keeps on writing
Doesn't say a word -- just sends you away
Just turns the pages of the book and doesn't say a thing
Has a puzzled look on his face -- raised eyebrows and wrinkled forehead and eyes
Asks you what you mean
Doesn't look at you
Asks someone else the question
Says he will help you later
Asks you to explain it in more detail
Keeps going over it and over it
Looks around the room
Keeps explaining and asking more questions
Frowns
Shakes her head
Asks more questions about it
Says, "Repeat it in different words."
Tells me to go back to my seat and figure out for myself
Goes on talking about something else
Doesn't repeat it
Doesn't answer you
Shrugs her shoulders
She ignores you
Stops writing and makes a face
He sighs
Doesn't ask you questions
Doesn't keep the subject up
She gets confused
Stretches out her neck and squenches her eyes
Sort of rubs her head
Doesn't give an example of it
She won't tell you how good it was, but goes on with her work
Starts talking to someone else
The way his eyes move
Says, "I didn't hear you."
She sits and thinks for a minute

25. What does your teacher do when something she is trying to demonstrate or explain messes up?

Starts over again
Says, "I'm sorry -- that was my fault."
Says, "Excuse me."
Kind of smiles
Tells us what went wrong and does it over
Asks someone to help her out
Erases it
Says it is wrong
Acts mad
Says, "I messed up."
Corrects herself
Keeps on talking and writing
Asks us to be patient and wait while he tries again
Tries again until he gets it right
Puts his head on his desk
Says, "I don't see what I did wrong."
Says she'll have to wait till tomorrow
Gives you a different assignment
Says she is stupid
Tells us to go sit down and takes it out on us
laughs
Tries to make the best of it
Asks us to help her
Feels sad  
Tries to explain it in a different way  
Gets shaky or uptight  
Gets frustrated  
Gets confused  
Looks up and wiggles her fingers  
Gets someone to clean up the mess  
Makes an excuse  
Fusses at herself awhile  
Says, "Forget it." or "The heck with it." or "That's that."  
Keeps a straight face  
Gets embarassed  
Looks at it real funny  
Stares at us like we're freaks  
Gets mad at us if we're talking  
Fusses at us for not telling him something was wrong  
Makes us stay after school and do it over  
Tries again. If it still doesn't work she throws it in the garbage.  
Starts yelling at us  
His face turns red and he goes to his desk and then comes back to try again  
Makes a joke about it
Below is a list of the categories arrived at through an inductive reasoning process. Under each category are the statements of pupil perceptions of their teachers. These perceptual statements constitute the basic conventions of each category. The perceptual statements were sorted into the categories by this researcher and a panel of experts with the results of the sorts being reported as inter-rater-agreement between this researcher and the experts.

1. **EXPLAINS AND CLARIFIES**

   Lectures
   - Explains it to us
   - Goes over it with the whole class
   - Goes back over the question and repeats it
   - Gives examples
   - When two or three questions have been asked about the same thing she explains it to the whole class
   - Tells us step by step how to do our lessons
   - Gives us clues
   - If someone doesn't understand something she goes over it again
   - She squenches her eyes and tries to explain it again
   - Puts it in easier words

2. **ASKS QUESTIONS**

   She asks a lot of questions about what she is teaching
   After she explains things she asks us a lot of questions about it

3. **ANSWERS QUESTIONS**

   Answers you
   Answers your questions

4. **SEEKS CLARIFICATION**

   Asks other questions about it
   Asks me to repeat my answer
   Sort of has a puzzled look on his face
   Asks me where I got the information
   Asks you something that sort of sounds like what you were talking about
Says he doesn't understand
Asks you to go back over it
Asks you what you mean
Asks you to explain it in more detail
Keeps talking and asking more questions
Keeps going over it and over it
Says, "Repeat it in different words."
Sort of rubs her head and looks confused
Asks someone else to explain it to her

5. **CORRECTIVE FEEDBACK**

Says, "No, that's not right."
Marks it wrong
Says, "Wrong."
Shakes her head no
Says, "Nope."
Circles the wrong answer

6. **MODELS-DISPLAYS-DEMONSTRATES**

- Writes on the board
- Does experiments
- Writes everything on the board that we need to put in our notes
- Brings extra materials, films, and speakers
- Shows pictures
- Puts your work on the bulletin board
- If you brought in something she tells the class to look
- Writes your answer on the board
- Tells your answer to the class and has them repeat it
- Uses her hands a lot to point out things
- Tells everyone to listen to my answer
- Tells me to explain it to the whole class

7. **MANAGERIAL SIGNALS**

Says, "Listen!" or "Pay attention!"
Says, "All eyes up front." or "Turn around."
If someone is going to talk to us she tells us to get out our notebooks
If the floor gets full he has us raise our hands for help
Has us to line up at the left side of his desk for help
Has us copy things off the board
Tells us to settle down and get to work
Tells us to be quiet
Tells us to shut up
Turns off the lights
Claps her hands
Holds up a sign that says, "Cool it" and taps on the back of it
 Writes "Be quiet" on the board
 Raises her voice
 Clears his throat
 Beats his desk with his hand
 Holds her ears
 Gets out the paddle
 Stops talking and waits
 Slams the door
 Taps a ruler on the desk
 Hits the chalkboard with a yardstick
 Stands with her hands folded and waits for us to be quiet
 Waves her hands to keep us quiet
 Looks at us out of the corner of her eyes
 Motions with her finger for us to come there
 Folds up her arms and puts out a deep breath

8. ASSISTING-ACTIVE LISTENING-FOCUSING ATTENTION

Comes around helping us
 Stretches out her neck and squences her eyes like she is trying to get what you say
 Takes you up to the board and helps you
 Sits in the middle of the room and when you go up to her she helps you.
 Looks straight in your eyes as you talk to her
 Nods her head as you talk
 Makes comments like "Yes" or "O.K." while you talk
 Doesn't talk while you are talking
 Waits until we are done then answers
 If anyone tries to interrupt us she sends them back
 She stops what she is doing
 She looks at the papers you are working on
 Doesn't talk to anyone else but you
 Looks like she is thinking about it by squinting her eyes and trying to picture what you are saying

9. POSITIVE REINFORCEMENT-REWARDS

Says things like: "Good," "Very good," "Right on," "Hey you're catching on!" "Yes" or "Yes, that's right!"
 Puts a check on your paper
 Repeats what we say
 Gives you a pat on the back
 Puts a good note on your paper
 Says, "You're doing great. I think you are the best in the class."
Tells me I am smart
Says, "That was a smart answer."
When I draw pictures she says she likes them
She tells me she is proud of me
She says, "Keep it up."
Says, "That's wonderful!"
Says, "That's really interesting."
She hugs you up a lot
She lets you check papers
Lets me run errands
Lets us come up to the front of the room to read
Picked me as captain
Lets me put things away for her
Lets me take the lunch money to the office
Lets me take notes to other teachers
Lets me clean his desk
Lets me be a lab helper and put away the glass
Lets me take up the lunch money
Lets me pass out papers
Lets you do what you want after you finish your work
Lets you stand up if you get good grades

10. BREAKS TENSION-HUMORIZES

Laughs
Makes a joke
Has fun with us
Gives us a break every once in a while
Has a big grin on her face
Lets us draw pictures
Lets us talk a little
Lets us make things with paper
Plays records and lets us sing
Gives us puzzles to work

11. DENIES-AVOIDS-IGNORES

Says, "Go sit down."
Keeps on working and writing
Doesn't look at you
She does not talk back
Says, "Tell me after school."
Says, "Let's not go into that now."
Says she doesn't have time for me
Tells us to find the answers on our own
Does not show us how to do something
Changes the subject on you
If you raise your hand she won't call on you
Says he'll help you later
 Doesn't give you the answer you asked for
 Tells you to go back to your seat and wait
 Sends me away when I try to tell her something

12. ATTACKS-BELITTLES-RIDICULES

  Says, "Shut up and sit down."
  Laughs at me
  Tells everyone I made bad grades
  Draws a circle on the board and has them put their nose in it
  Points at you
  Shakes you
  Says, "Ah, you should have done better."
  Says, "You're smarter than that."
  Gives you a dirty look
  Says, "You didn't study very good."
  Says, "Look at that, is that right?"
  Says, "That's a stupid answer."
  Tells us we have a bad note for our parents
  Says our work is terrible
  Stands in front of the class and says things about you
  Calls you names like "knucklehead"
  Tells you you goofed it
  Pulls your hair
  Rips up your papers and gives them back
  Says, "You're wrong!" real loud
  Takes me out in the hall for a talking to
  Makes us put our hands over our mouths
  Makes us stand up with our hands on our heads for 10 minutes
  Stands us out in the hall
  Tells us to keep our mouths shut and eyes to the front
  Makes us stand in the corner
  Sits you in a chair by yourself
  Gives us 5 or 10 minutes of silence
  Sends you to the office
  Makes you stay after school
  Takes us to the office
  Makes us write something 100 times
  Moves you from where you are sitting
  Gives you a 500 word essay
  Makes the whole class stay after school
  Asks if she is disturbing us
  Asks where have I been all day
  Says, "Sad, sad, sad!"
  Gripes and says, "Think and try again."
  Yells at us
  He looks me straight in the eyes when something goes wrong
  She will come around and tear up what you are doing and
  fuss at you
Gets steamed up when we ask her a question  
Blames stuff on me  
Says, "The longer you talk now the longer you will have to stay after school"  
Says, "There's going to be trouble and a lot of bad grades."  
Says he doesn't want to see that again  
Fusses at you for a while  
Embarasses you in front of the whole class
APPENDIX G
DIRECTIONS FOR JUDGES' SORTING STUDENT PERCEPTIONS

Included in this packet are the following materials:

A presentation of the twelve categories with their respective definitions

Twelve 3 x 5 inch note cards with category names printed in red

Twelve envelopes with a category name printed on the outside

Several slips of paper with student perceptions or teacher behaviors

The teacher behaviors on the slips of paper are exact statements used by students to describe their teacher's classroom behavior. As such, these student statements may contain grammatical errors. You are to sort the student statement slips into the twelve categories by placing those student statements under the category you feel it best belongs.

Once you have sorted all the cards into their appropriate categories, place each category card and its respective student statements into the envelope with the same category name and seal the envelope. Then, place all the envelopes in the larger envelope and return it to me.

Thank you very much for your assistance.
The following are the teacher-behavior categories derived from pupil perceptions of their teachers. The definitions for these categories come from several existing category systems. (i.e., Hough, Flanders, Bales, MacDonald, Galloway)

**EXPLAINS OR CLARIFIES:** Giving facts or opinions about content or procedure; expressing his own ideas; asking rhetorical questions. Rendering a previous statement more intelligible either by (a) restating or rephrasing, or, (b) adding informative details.

**ASKS QUESTIONS:** Asking questions about content or procedure with the intent that a student answer such questions. The questions may also ask for student opinion regarding content or procedure.

**ANSWERS QUESTIONS:** Includes direct answers to student questions. Such answers may give information or opinion but must be responses which answer or are directed toward answering student questions.

**SEEKS CLARIFICATION:** Behaviors used by the teacher to seek additional information which serves to clarify previous student talk.

**CORRECTIVE FEEDBACK:** Includes behaviors that are designed to indicate the incorrectness or inappropriateness of student behavior in a way that enables the student to see that his behavior is incorrect or inappropriate and/or why. Such teacher behaviors are restricted to cognitive or skill areas in which behavior can be considered correct or inappropriate by definition, generally accepted convention, or can be empirically validated as being a fact.

**MODELS-DISPLAYS-Demonstrates:** Behaviors which point up student work as being considered as a standard of excellence to be imitated. Such teacher behaviors as writing on the board, providing extra reference materials, doing experiment, or demonstrations, etc., are also included in this category.
MANAGERIAL SIGNALS: Giving directions, commands, or orders to which the student is expected to comply. These behaviors may be either verbal or non-verbal. The behaviors may be intended to change student behavior from a non-acceptable to acceptable pattern.

ASSISTING-ACTIVE LISTENING-FOCUSBING ATTENTION: A behavior that implies a willingness to listen with patience and interest to a pupil. By paying attention to the pupil, the teacher exhibits an interest in the pupil, and implicitly manifests approval, satisfaction, or encouragement. An act that meets a pupil's request; a nurturant act.

POSITIVE REINFORCEMENT-REWARDS: A supportive behavior which exceeds a simple designation of correctness, and rewards students for their performance. Includes behaviors with a positive value orientation directed at student behavior. Behaviors which praise or reward current behavior as well as previous or predicted future behavior are included in this category.

BREAKS TENSION-HUMORIZES: Behaviors which tend to open up and/or eliminate the tension or anxiety of the situation. Jokes that release tension not at the expense of others. Laughing and joking that tend to ease tension.

DENIES-AVOIDS-IGNORES: A behavior that implies an unwillingness or inability to engage attentively in the communicative process, thus, indicating disinterest or impatience with the pupil. A behavior that openly ignores a pupil's need, or that is insensitive to pupils feeling; a tangential response.

ATTACKS-BELITTLES-RIDICULES: A harsh, punitive, blamelaying, or guilt inducing behavior. A behavior implying strong disapproval of a pupil's behavior or pupil interaction. An expression that indicates strong negative overtones, disparagement, or strong dissatisfaction. An expression which functions in making someone or something the object of contemptuous laughter by joking, mocking, or caricaturing.
APPENDIX H
Dear Parents,

I am doing some work on a Doctor of Philosophy degree in education. As part of my work I will be interviewing children in many schools. I will be asking them questions about their teachers. I have the support of the teachers involved. These interviews will be put on a tape recorder. The students comments will be used to help teachers better understand how they are viewed by their students. If you would permit me to interview your child, would you sign the form and send it back to school with your child.

Thank you for your help.

Sincerely,

Truman Whitfield

______________________________________ has my permission to participate in the interview.

(Name of student)

(Parent's signature)
APPENDIX I
This appendix contains a presentation of the procedures used in the development and pilot testing of the questionnaire. Since the questionnaire played such a vital role in the collection of the students' perceptual statements, it was felt that a thorough treatment of the development and pilot testing of the questionnaire be presented.

Development of the Questionnaire-Interview Schedule

In developing the questionnaire-interview schedule (hereafter referred to as "questionnaire") used to collect student perceptions of their teachers several problem areas had to be considered. The following are examples of such questions: What constructs were used as the basis for each question? To what population is the questionnaire to be administered? How shall the items be constructed; i.e. open ended, forced choice, or a series of cues for students to share their perceptions of their teachers? What steps can be taken to ascertain the reliability and validity of the measurements obtained by using the instruments? How are the items to be scored? These particular questions were dealt with in the development and pilot testing of the questionnaire. The following paragraphs will be a presentation of the methods employed by this researcher to answer the questions mentioned above.

In arriving at the constructs to be used as a basis for item development several avenues were pursued. Existing observational systems were consulted to identify some of the constructs that could be used in the questionnaire. Of primary importance were those
of Flanders (Flanders System of Interaction Analysis), Hough and Duncan (Observational System for Instructional Analysis) and Galloway (Galloway's procedure for analyzing nonverbal behaviors in the classroom).

In addition to consulting existing observational systems, other sources were also consulted. The research of several educators concerned with describing characteristics of good and poor teachers was also studied in order to arrive at constructs to be used as the basis for questionnaire items (Biddle, 1964; Combs, 1965; Hamacheck, 1972; Stern, 1963).

In developing the initial questionnaire the problem of whether to use a "standardized" or more "open" format arose. There are arguments in favor of both. Komhauser (1959) speaks in favor of the more "open" format in saying:

"The outstanding advantage of free response questions (sometimes called 'open ended' questions) is that they can provide a more adequate picture of what the respondent has in mind, what is important to him in respect to the topic under discussion, how intensely he feels about it, what the question means to him, within what frame of reference he is answering [p. 427]."

The "open response" format was selected for the items in the questionnaire because this approach more nearly fit the purpose of the study.

The first draft of the questionnaire contained forty items. Many researchers have written about the construction of questionnaire and interview items (Connell, C. F., and Kahn, Robert, 1953;
Komhauser, A., 1959). Some of these sets of guidelines were consulted in constructing the items on this instrument. Appendix A contains a list of guidelines developed by Komhauser. This list is very thorough and was therefore used most extensively by this researcher.

The questionnaire items were then subjected to close analysis by Dr. Edgar Dale, a noted authority in children's vocabulary. Dr. Dale studied each item changing the wording where necessary to remove any ambiguities or words deemed too difficult for sixth grade children.

The questionnaire was then field tested with seventy sixth-grade children in a public school system in western Kentucky. The children were asked to respond to the items both as questionnaire items and in an interview conducted by this researcher.

In interviewing children one must be aware that failure to provide some context for the child often causes difficulty in responding. The term "open-ended" or "free-response" might suggest the notion that the questions were posed without a focused structure. Selltiz, et. al. (1959) have used the term "focused" interview.

"For some research problems, a still more flexible approach than that provided by a standardized interview with open questions is appropriate... Such interviews take various names -- the 'focused' interview, the 'clinical' interview, the 'depth' interview, the 'non-directive' interview, etc. They are commonly used for a more intensive study of perceptions, motivations, etc. than a standardized interview, whether with closed or open questions, permits...

...In the focused interview...the main function of the interview is to focus attention upon a given experience and its effects...
Although the respondent is free to express completely his own line of thought, the direction of the interview is in the hands of the interviewer [pp. 263-264]."

The "focused-interview" technique was employed in presenting the questionnaire items to the students.

Each question was analyzed in terms of its ability to elicit behavioral responses from the students. In addition, attention was focused on the ease with which the students responded to the items as they appeared in the questionnaire and in the interview. The questionnaire and interview responses were analyzed with changes being made in the instrument as needed to insure rational responses. Revised forms of the questionnaire were used with different students in an attempt to arrive at a final instrument.

Nonverbal cues of stress and anxiety were looked for as indicators of the uneasiness experienced by the student in responding to the questionnaire-interview terms. Good and Hatt (1952) speak of the importance of observing nonverbal cues in conducting interviews.

"It is commonplace to feel, when on close terms with a friend, that a casual word, gesture, or look conveys a complete message or story. Yet this is not usual between mere acquaintances, and this describes the importance of what may be called subliminal cues. That is, everyone betrays his emotions in various ways. As we become accustomed to friends, we learn, consciously or unconsciously, the tiny behavioral accompaniments of these emotions. Those cues which are not recognized consciously, which are below the threshold of perception, are called subliminal... Sometimes guesses are based on conscious recognition of these cues; other guesses, equally good, which seem to be based on no such recognition, spring from such unconscious observations. If insight refers to such procedures, then it is clear
that it can be acquired. To improve his 'insight',
the student of social relations should attempt to
consciously: 1. Develop an alertness to the fact
that there are many subliminal cues, and that one
can learn to 'read' them. 2. Attempt to bring
these cues to a conscious level, so that compari­
sions can be made with the hunches of other
observers and interviewers. 3. Systematically
check the predictions made from these hunches,
to see which are correct [pp. 186-187]."

Students were asked about the difficulties they experienced in the
questions either while reading and reacting to them as questionnaire
items, or reacting to them as interview items.

All of the above information (i.e. analysis by Dr. Dale, and
field testing of the item pool) was considered in selecting the items
to be used in the instrument. The resulting instrument contained
twenty-five items. A copy of the questionnaire appears in Appendix
B.

Pilot Testing of the Questionnaire

To get an idea of the usability of the instrument developed
for gathering pupil perceptions of their teachers, as well as indicies
of the reliability and validity of the measurements obtained by using
the instrument, a pilot test was conducted. In addition, the pilot
testing served as a training session in the procedures used by this
researcher. Through direct contact with the students this researcher
learned better how to administer the questionnaire as well as to
conduct the interview. The following paragraphs will report on the
population involved in the pilot study, the procedures used in collect­
ing data, and a discussion of the reliability and validity of the
measures obtained.

One of the major problems had to do with the nature of population involved in the pilot study. At least one or more sixth grade classes were desired. Since the study concerns the use of student's perceptions of their teachers it was also necessary that the students selected for the pilot study have extended contact with the teachers prior to reacting to the questionnaire-interview-schedule.

The school in which the pilot study was conducted was a public school in western Kentucky. The school was an elementary school which housed grades one through eight. The organizational pattern of the upper elementary grades (grades 5 through 8) was quasi-departmentalized. As such the students were with the same teacher for at least three continuous hours a day. This organizational pattern afforded the students plenty of time to become acquainted with their teachers. It was also assumed that through having other teachers the students would have a referent to which they could compare the behaviors of the teacher in question.

A second reason this school was chosen was because there were two classes of students who had had the same teacher the previous year. These students were all sixth graders. One of the classes contained nineteen students while the other had twenty-seven members. The classes were racially integrated, and the children ranged from low normal to very bright in intelligence. One of the classes met in the morning from 8:00 until 10:30, and the other met in the afternoon
from 12:30 until 2:45.

Procedures for Collecting the Pilot Test Data: Each of the two classes was given the questionnaire first as a questionnaire. However, the instrument used in the pilot study contained ten more items than the instrument developed for the study proper. Ten of the original items were restated later in the instrument in order to obtain a measure of internal consistency reliability. This entire procedure will be explained in the section titled "Reliability of the Measurements." Each item was read to the students during the administration of the questionnaire. The students were given time to respond to each item before the next one was read. Questions raised by the students were answered by this researcher. Difficult words were spelled for the students. Cues to responses were avoided except in cases where it was necessary in order for a student to respond to a question.

During the week that followed the initial administration of the questionnaire, five students were selected from each class to participate in an interview. These students were chosen at random. Letters granting permission to interview these children were sent home with each child. (A copy of the letter appears in Appendix H.)

Each of the ten children were interviewed by this researcher.

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1Before the questions were read the students were assured that their responses would be seen only by this researcher. They were encouraged to give their true feelings and perceptions of their teachers.
The interviews were conducted in total privacy with only the student and this researcher present. A counseling room was chosen as the interview site. Before each interview was conducted the nature of the interview was explained to each student. The students were assured that no one other than this researcher would see or hear their responses. They were told that the interviews would be tape recorded. If the students were ill at ease over recording their voice, some practice runs were made with them. At the conclusion of each interview a portion of the interview was played back for the student.

The "focused-interview" approach discussed in Chapter II was the interview technique used. The questionnaire was employed in that the students were asked the same questions they had responded to in the questionnaire, and those questions were in the same order. However, as the questions were asked additional prompting cues were used. Goode and Hatt (1952) speak of the importance of the probe.

"The interviewer cannot be satisfied with merely writing down the answer. He must be certain (1) that he understands the answer, and (2) that it is actually an answer to the question. Often this will require further questioning, an attempt to 'probe' more deeply into the meaning of the response given [p. 201]."

When the probing technique is used the possibility of experimenter bias may enter into the response offered by the student. There is at least the possibility that the probe will cause the response to be something other than the respondent's original thinking. Maccoby and Maccoby (1954) support this notion when they say:
"It should be noted that all nondirective probes do, in a sense, 'direct' the respondent. Even if a respondent's statement is merely reflected back to him, or the question is repeated or a neutral question is added, like, 'Tell me more about that' or 'Why do you feel that way?' the mere fact that a particular part of the interview has been selected by the interviewer for probing will guide the respondents into a different channel than he would have chosen spontaneously. Indeed, the intent of introducing the probe is precisely to accomplish this. If the objective has not been met with the single use of the standard question the interviewer probes in order to obtain information that will meet the objective. The question must be asked in such a way as to elicit a response which will provide information about a given dimension, and frequently the respondent must be 'directed' to that dimension if the necessary data are to be obtained [p. 466]."

These suggestions and precautions were taken into consideration and probes were used only when absolutely necessary, and then with extreme caution to avoid the problem of experimenter bias.

One week following the audio-taped interviews the questionnaire was again administered to all the students in the two classes. The same method as in the previous administration of the questionnaire was followed. With the conclusion of the second administration of the questionnaire the data gathered was analyzed.

**Procedures for the Analysis of Pilot-Test Data:** The analysis of the data was for the purpose of determining the degree of reliability and validity of the measurements obtained by the questionnaire. Each of these concepts (i.e. reliability and validity) will be discussed more thoroughly later in this section.

Before the desired data analysis procedures could be employed the raw data had to be modified. Since the data obtained were
students' statements of their perceptions of their teachers, it was necessary to translate these qualitative data into quantifiable forms. By doing this conventional statistical techniques could then be applied to the data.

The pre-test-post-test responses were first converted into quantifiable form. To do so each response on each student's pre-test was assigned a score of +1. The post-test was scored by comparing the response to each item on the post-test with its counterpart on the pre-test (i.e. item 1 post-test with item 1 pre-test, item 2 post-test with item 2 pre-test, etc.) If the responses to the two items agreed in meaning, as determined by this researcher and his research analysts, the post-test item was assigned a value of +1. If the responses to the two items did not agree the post-test item was assigned a value of 0. This procedure was followed for every item for every student involved.

The audio-taped interview responses were scored much the same as the post-test responses. Since the same instrument was used both in the questionnaire and the interview, it was possible to compare the responses to the items on the interview with their counterparts in the pre-test questionnaire. The audio-taped responses were scored +1 if they agreed in meaning with the corresponding item responses in the questionnaire. If the two responses did not agree then the audio-taped response received a score of 0. This procedure was followed for the responses of every student involved.

In order to obtain a measure of internal consistency re-
liability, the questionnaire was extended from the original twenty-five questions to thirty-five questions. The extra ten questions were restatements of ten questions chosen at random from the original twenty-five. Each of the latter ten questions was reworded but still cued the same context as its counterpart in the original list. Each of the responses to the ten original items was assigned a value of +1. If the response to an item in the last ten questions agreed in meaning with the response to its counterpart in the original items, the latter item was assigned a value of +1 also. If there was no agreement the response on the latter item was assigned a value of 0.

Each of the preceding sets of scores was used to obtain reliability measures. In addition to these measures, the discrimination power of the items was analyzed, in order to ascertain whether one could more easily respond rationally to certain of the items than to others. This procedure added to the discussion of the validity of the measurements obtained by using the questionnaire. The notions of validity and reliability will be discussed extensively in the following paragraphs.

Reliability of Measurements: An understanding of reliability is complicated. In practical terms there are many synonyms for reliability. Kerlinger (1964) lists "dependability, stability, consistency, predictability, (and) accuracy." Kerlinger goes on to say,
"...educational measurements...are more or less variable from occasion to occasion. They are unstable and relatively unpredictable. They are consistent or not consistent. If they are reliable, we can depend upon them. If they are unreliable, we cannot depend upon them [p. 429]."

Kerlinger poses three different approaches to the definition of reliability. He proposes that perhaps dealing with reliability in terms of the amount of error of measurement in the measuring instrument would better "define and solve both theoretical and practical problems."

Errors of measurement contribute to the total variance of scores obtained through the use of some measuring instrument. Each obtained score \( X_t \) is composed of what is known as a "true" score, \( X \), which is known only theoretically, and an error component \( X_e \), which is some increment or decrement resulting from several of the factors responsible for errors of measurement. (Sources for errors of measurement will be discussed later.)

The total variance of obtained scores (\( V_t \)) is the composite of true variance \( V_\infty \) and error variance \( V_e \). Put into an equation we have \( V_t = V_\infty + V_e \).

"Reliability is defined, so to speak, through error: the more error the greater the unreliability; the less the error, the greater the reliability." (Kerlinger, 1964, p. 429) Reliability then is the proportion of true variance to the total obtained variance of the data yielded by a measuring instrument. Put into equation form we have:

\[
    r_{tt} = \frac{V_\infty}{V_t}
\]
Referring to the total variance equation above one can see that as the error variance increases, the true variance decreases when the total variance remains constant. Therefore as the error variance becomes progressively greater than the true variance, the reliability is decreased.

Variance is either systematic (in which case scores tend to lean in one direction or the other, i.e. all high or all low) or random (in which case scores tend to lean first one way then the other). Relating variance to errors of measurement, Kerlinger (1964) says:

"Errors of measurement are random errors. They are the sum or product of a number of causes; the ordinary random or chance elements present in all measures due to unknown causes, temporary or momentary fatigue, fortuitous conditions of a particular time that temporarily affect the object measured or the measuring instrument, fluctuations of memory or mood, and other factors that are temporary and shifting. To the extent that errors of measurements are present in a measuring instrument to this extent the instrument is unreliable [p. 430]."

This last notion was demonstrated mathematically in the above discussion of errors of measurement and error variance.

Just as the preceding paragraphs dealt with the mathematical logic of reliability, there is also a philosophical logic to reliability. Schwab (1960) defines reliability in the philosophic sense as:

"... the extent to which the terms of a research program are free from vagueness and ambiguity; the extent to which the referents of the terms are given distinct and unequivocal location and limit; the extent to which the manipulations and measurements
indicated by the terms can be undertaken with precision and repeated with uniform consequences [p. 17]."

In assessing reliability of measures both the mathematical and philosophic assumptions must be taken into account. Such was the case in the present study.

Reliability coefficients were obtained for three sets of scores: internal consistency of the questionnaire retest, internal consistency of the audio-taped interviews and internal consistency reliability of the pre-test. The statistic used in all three cases was the Kuder-Richardson 21 formula for obtaining measures of rational equivalence (Kuder-Richardson, 1939). The formula is:

\[ r_{tt} = \left( \frac{n}{n-1} \right) \left( \frac{\sigma_x^2 - \sum p q}{\sigma_x^2} \right) \]

where--n = number of items on the test
\( \sigma_x^2 \) = the variance of the class scores
p = proportion of students answering an item correctly
q = proportion of the class answering an item incorrectly

Tables 1, 2, 3, below present a report of the means, standard deviation, variances, and reliability coefficients of the scores of both classes used in the pilot study. Table 1 presents statistics related to the retest internal consistency reliability; Table 2 reports statistics related to the internal consistency of the audio-tape reliability; and, Table 3 presents the statistics related to measures of internal consistency reliability of the pre-test.
### TABLE 1
MEANS, STANDARD DEVIATION, VARIANCE, AND INTERNAL CONSISTENCY RELIABILITY COEFFICIENTS OF THE QUESTIONNAIRE RETEST FOR THE CLASSES OF THE PILOT STUDY

<table>
<thead>
<tr>
<th>Class</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>$r_{tt}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>16.92</td>
<td>3.44</td>
<td>11.85</td>
<td>.61</td>
</tr>
<tr>
<td>1:00</td>
<td>18.79</td>
<td>2.69</td>
<td>7.22</td>
<td>.42</td>
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</tbody>
</table>

### TABLE 2
MEANS, STANDARD DEVIATION, VARIANCES, INTERNAL CONSISTENCY RELIABILITY COEFFICIENTS FOR THE AUDIO-TAPED INTERVIEWS IN THE PILOT STUDY

<table>
<thead>
<tr>
<th>Class</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>$r_{tt}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>21</td>
<td>2.28</td>
<td>5.20</td>
<td>.51</td>
</tr>
<tr>
<td>1:00</td>
<td>19.8</td>
<td>2.94</td>
<td>8.64</td>
<td>.65</td>
</tr>
</tbody>
</table>

### TABLE 3
MEANS, STANDARD DEVIATION, VARIANCE, AND INTERNAL CONSISTENCY RELIABILITY COEFFICIENTS OF THE PRE-TEST FOR THE CLASSES OF THE PILOT STUDY

<table>
<thead>
<tr>
<th>Class</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>$r_{tt}$</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>1:00</td>
<td>5.89</td>
<td>1.68</td>
<td>2.83</td>
<td>.33</td>
</tr>
</tbody>
</table>
The reliability coefficients reported in Tables 1, 2, and 3 are extremely conservative estimates. The paragraphs which follow present some possible explanations for such conservative estimates.

The nature of the data which were used as a basis for obtaining measures of reliability offers one possible explanation for the conservative reliability coefficients. The data were qualitative data (i.e. statements of student perceptions of their teachers). Many factors could have been operating to mold the students' perceptions. Such things as fatigue, fluctuations of memory or mood, fortuitous conditions at a particular time that temporarily affect the object measured or the measuring instrument. Kerlinger (1964) discusses these as errors of measurement.

Another element that possibly caused the conservative reliability estimates was the means employed to quantify the qualitative data. The statements of student perceptions had to be converted into some quantifiable form before the reliability coefficients could be obtained.

The sources of variance operating on the obtained scores offer a better rationale for the scoring effect on the reliability of the measures. One source of variance has already been discussed above (i.e. errors of measurement). A second source is that of teacher behavior. It is highly probable that teacher behavior is inconsistent over time. If, in fact, it is, then scoring one set of student perceptions of teacher behavior against some other set of student perceptions of that same teacher's behavior at another time
would definitely interfere with the reliability of the measures obtained. Such was the case with both the retest and the audio-tape internal consistency reliability measures. In both cases, the statements of student perceptions were scored using the pretest responses as a key. If the responses to two items were not in agreement, then the post test score or the audio-tape score was lowered and so was the corresponding reliability coefficient as reported in Tables 1 and 2.

The above arguments are explanations for the conservative nature of the retest and audio-tape reliability. A more conservative reliability coefficient was obtained for the internal consistency (see Table 3). The same arguments used above can also be used to account for this low coefficient. In addition, however, there is another "logical" explanation. This researcher observed that when students responded to the questionnaire they generally reported only one perceptual statement. However, when being interviewed, the same student would identify an average of four perceptual statements for the same item.

The pre-test internal consistency measures were obtained by having the students respond in questionnaire fashion to ten items added on to the twenty-five item questionnaire. The ten items were restatements of ten randomly selected items from the original twenty-five items. Several students commented that they noticed that the two questions were asking the same thing and that they answered it one way for one question and another way for the other. If one were to
assume that this was true for some of the students, then such variability could be offered as an explanation for low internal consistency reliability. Such was the case in this study.

**Validity of Measurement:** The validity of the questionnaire is a logical argument. Schwab's (1960) definition of validity was used by this researcher. Schwab defines validity as:

"...the extent to which the terms of a research program approximate to the presumptive richness and complexity of the subject matter [p. 21]."

The terms of this research program are pupil perceptions of teacher behavior related to the substantive dimensions of that behavior defined by the items in the questionnaire.

The presumptive richness and complexity of the research program can be better understood by analyzing the sources of variance. There are three distinct sources of variance involved in this portion of the study. (1) Pupil perceptions of teacher behaviors are sources of variance. The richness of the child's language might act as a source of variance in that a student might not be able to report that perception. (2) The teacher's behavior also functions as a significant source of variability. (3) Errors of measurement, as discussed in the section on reliability, also function as an important source of variability.

In dealing with the richness and complexity of the data, and in turn the validity issue, the statements of pupil perceptions of their teachers were analyzed from a logical perspective. In making this analysis, valid (rational) statements of pupil perceptions were
defined as all those reported teacher behaviors which were viewed to be "reasonable explanations" of the students' perceptions. "Reasonable explanations" can be defined by interpreting each reported pupil perception in the following way: "Can I reasonably assume that the behavior reported by the student could, in fact, be a behavior used by the teacher in the context defined by the question?" As an example, if a student were to respond, "at the desk" when asked, "Where in the classroom does your teacher spend most of her time?" that response would be deemed logical and reasonable. Invalid (irrational) statements of pupil perceptions of teacher behavior were defined as "unreasonable explanations" of the perception. One might cite as an example of an "unreasonable explanation" of a perception, the response "on her head," or "I don't know" to the question, "Where in the classroom does your teacher spend most of her time?" This researcher and a research associate analyzed each of the perceptual statements using the above definitions. Every response that was viewed to be an invalid (irrational) response to the question associated with it, was cast out. What resulted was a key for each class. Each key was composed of "valid" (rational) statements of perceptions of teacher behaviors within the substantive dimensions of that behavior defined by the items on the questionnaire. This procedure was an attempt to better approximate the construct validity of the measurement.

The notion of content validity was also analyzed. The question under study here was, "Is the substance or content of this measure
representative of the content or universe of the content of the property being measured?" Referring to the discussion above the answer would be "yes." But, if we asked, "Do the data include all of the presumed behaviors in their complexity?" the answer would have to be "no." It is unlikely, if not impossible, to present a universal set of teacher behaviors in any one context. The impossibility of students reporting perceptions of all of the behaviors a teacher might use in any one context is further limited by the richness of students' language. However, the data include many of the presumed behaviors. No one individual student would report any behavior in its complexity, however, collectively students might describe many of the behaviors within a universe of behaviors.

Additional Concerns Dealt with in the Pilot Study: In addition to the notions of reliability and validity, an effort was made to explain the ability of the questionnaire items to discriminate among various student perceptions of teacher behaviors. Often designers and users of observational systems note the extreme difficulty of identifying and categorizing specific teacher behaviors. The questions used in this study request that the student identify teacher behaviors associated with a given context (i.e. the context set by each of the questionnaire items). It seems that the same problems faced by those who use observational systems also plagued the students in reporting their perceptions of their teachers.

There was some obvious difference in the ease with which a
student could respond to certain items as compared to others. For example, it would be much easier to respond to the question, "Where in the classroom does your teacher spend most of her time?" than it would be to answer the question, "Does your teacher ever do anything to make you feel important? What does she do?"

To test the difference in the difficulty of the items in the questionnaire, the Cochran Q Statistic was employed. Although not specifically intended to deal with this type of problem, the Cochran Q can be employed (Siegel, 1970, p. 161).

The Cochran Q test deals with dichotomous data. The qualitative data collected using the questionnaire had to be converted to quantifiable dichotomous data. To do so a key was first developed by taking, item by item, all the pre-test responses of students within any one class and analyzing each response by asking the question, "Is this a logical and possible teacher behavior within the context defined by the question?" If the response is logical and possible, then it was scored a +1; if the response was not logical it was scored a 0. Tables were then constructed for each class (see Tables 4 and 5). Each table contained K columns (the "K" signifies each item) and N rows (the "N" indicates subject). Also included is a column labeled \( L_i \) (the sum of all the correct responses by any one subject), and \( G_j \) (the sum of all the correct responses to any one item "K"). An examination of the data presented in Tables 4 and 5 allows one to ascertain which of the questions in the questionnaire were the most difficult.
**TABLE 4**

**PRESENTATION OF THE 9-00 CLASS-DATA USED FOR THE COCHRAN Q STATISTIC**

<table>
<thead>
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N = Number of Items

Lq = Cochran Q Statistic
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<th>k Items</th>
<th>$L_1$</th>
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</table>

**TABLE 5**

PRESENTATION OF THE 1:00 CLASS DATA USED FOR THE COCHRAN Q STATISTIC
Using the data plotted in Table 4 the following formula was employed:

\[
Q = \frac{(K-1) \left[ K \sum_{j=1}^{K} E_j^2 - \left( \sum_{j=1}^{K} E_j \right)^2 \right]}{K \sum_{i=1}^{N} L_i - \sum_{i=1}^{N} L_i^2}
\]

The null hypothesis tested using the Cochran Q Statistic was:

\[ H_0: \text{The probability of a logical and possible response is the same for each of the twenty-five items in the questionnaire.} \]

The region of rejection consisted of all values of Q which were so large that the probability associated with their occurrence under \( H_0 \) is equal to or less than \( = .01 \). The results of the Q Statistic appear in Table 6.

\[
\begin{array}{ccc}
\text{Class} & \text{df (k-1)} & Q \\
9:00 & 24 & 112.3566^* \\
1:00 & 24 & 92.3415^* \\
\end{array}
\]

\(^* p < .001\)

Examination of the information in Table 6 indicates that the probability of the items in the questionnaire cueing logical and possible responses with equal difficulty by chance is indeed very little \((p < .001)\). Therefore the null hypothesis of no significant difference is strongly rejected.
PROCEDURES USED IN THE DEVELOPMENT AND PILOT TESTING OF THE QUESTIONNAIRE

**Phase I**

- **Initial Item Preparation**
  - Identification of Constructs for Questionnaire Items
  - Writing of Initial Item Pool
  - Consultation with Dr. Dale Concerning the wording of the Questionnaire Items
  - Restatement of Initial Items

**Phase II**

- **Field Testing Of Initial Items**
  - Selection of Population For Field Test
  - Administration of Initial Instrument As Questionnaire
  - Administration of Initial Instrument as Interview Schedule
  - Analysis of Pupil Responses to Questionnaire and Interview Schedule
  - Restatement of Questionnaire Items

**Phase III**

- **Pilot Study**
  - Selection of Population For Pilot Study
  - Restatement of Ten of The Items for Internal Consistency
  - Administration of Questionnaire as Pre-test
  - Selection of Students for the Interview
  - Administration of Audio-Taped Interviews
  - Post Test Administration of Questionnaire

**Phase IV**

- **Treatment of Data**
  - Scoring of Questionnaires and Interviews
  - Calculation of Post-Test Internal Consistency
  - Calculation of Internal Consistency for Audio-Taped Interviews
  - Calculation of Pre-Test Internal Consistency Reliability
  - Calculation of Cochran Q Statistic
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REFERENCES

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**Unpublished Materials**

